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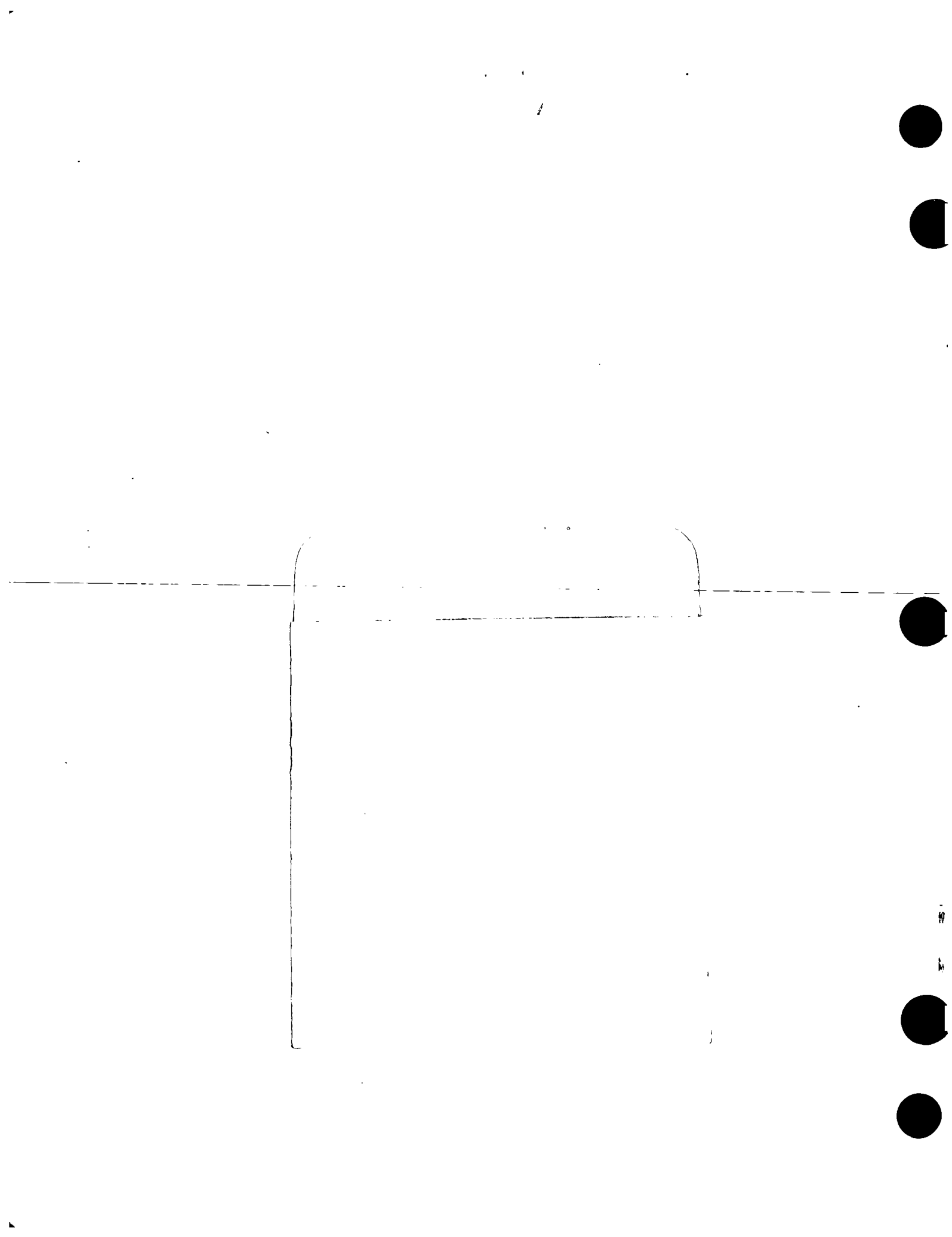
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AIR TRANSPORT OF SUPPLIES AND EQUIPMENT: STANDARD LOADS IN AIR FORCE C-5 AIRCRAFT

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DEPARTMENTS OF THE ARMY, THE NAVY, AND THE AIR FORCE

APRIL 1974



FIELD MANUAL 55-13

AIR FORCE MANUAL 76-12

DEPARTMENT OF THE ARMY
DEPARTMENT OF THE AIR FORCE
WASHINGTON D.C., 30 April 1974

Air Transport of Supplies and Equipment:

STANDARD LOADS IN AIR FORCE C-5 AIRCRAFT

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Purpose

The purpose of this manual is to provide Army and Air Force units with the information necessary for air movement of Army aircraft and vehicles in Air Force C-5 aircraft.

1-2. Scope

The material presented in this manual applies to all activities that utilize Air Force C-5 aircraft for movement of Army aircraft and vehicles. This manual presents selected Army aircraft and combinations of vehicles that can be loaded, restrained, and flown in C-5 aircraft. Sufficient explanation of procedural data is given to provide Army and Air Force units with a general information manual on how to prepare, load, tiedown, and offload the Army aircraft and vehicles. (Air Force only: When the provisions contained in this manual differ from procedures set forth in Air Force Technical Order 1C-5A-9, the latter shall take precedence.)

1-3. Other Publications

Appendix A contains a complete list of current references to be used in conjunction with this manual.

1-4. Changes and Revisions

Users of this publication are encouraged to submit recommended changes or comments to improve this publication. Comments should be keyed to the specific page, paragraph, and line of the text in

which the change is recommended. Reasons will be provided for each comment to insure understanding and complete evaluation. Comments from Army sources should be prepared using DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commandant, US Army Transportation School, ATTN: Office of Doctrine Development, Literature and Plans, Fort Eustis, Virginia 23604. Comments from Air Force sources should be forwarded direct to Headquarters, Military Airlift Command, ATTN: DOXT, Scott Air Force Base, Illinois 62225.

1-5. Responsibilities

In moving the Army aircraft and vehicles by air, the Army unit commander is responsible for the following:

- a. Effecting advance coordination with the transporting unit.
- b. Providing manpower and the necessary shoring, padding, and other equipment required to accomplish item preparation for loading and offloading.
- c. Providing guidance relative to security, safety, and technical peculiarities of specific items.
- d. Preparing the item for air movement with the technical supervision and assistance as required from appropriate field support units.
- e. Loading the item into, tying it down in, and offloading it from the aircraft, subject to the approval of the aircraft commander.

Section II. OPERATIONAL INSTRUCTIONS

1-6. Preparation of Items

Before preparation of equipment is begun, all preparation, loading tiedown diagrams, tiedown instructions, and pertinent photographs should be carefully reviewed.

a. Check the items for general condition. Tighten any loose parts.

b. When necessary, remove top bows, canvas tarpaulins, and other removable parts and stow them securely in the vehicle.

c. Position rearview mirrors, tailgates, windshields, antennas, and similar equipment to prevent damage and to reduce dimensions.

d. Secure all loose equipment in the vehicle.

e. If the vehicle is loaded, the load must be restrained in the vehicle to meet the aircraft cargo restraint requirements of TO 1C-5A-9. Bracing, lashing, and tiedown nets, as appropriate, should be used.

f. Army aircraft and vehicle fuel tanks will be no more than $\frac{3}{4}$ full. When items are to be airlifted on ramp of aircraft, fuel tanks will be no more than half full. Cargo tanks of tank trucks and tank trailers will be emptied and purged in accordance with IAW AFR 71-4/TM 38-250 before being loaded on Air Force aircraft.

g. Materiel and equipment, other than on equipment materiel (OEM), required in the preparation and loading of the items aboard the aircraft are indicated in the procedures for the individual load.

1-7. Personnel

Personnel selected to prepare, load, tie down, and offload vehicles/cargo aboard US Air Force aircraft work under the supervision of the Air Force loadmaster. They must be qualified and trained to operate, load, restrain and offload equipment and have a working knowledge of arm and hand signals prescribed in TO IC-5A-9 and TM 55-450-15. They must have a thorough knowledge of their equipment and tiedown techniques. They must properly position vehicles complying with hand signals provided by the aircraft loadmaster and using the lowest gear ratio and engaging all driving wheels. After positioning vehicles they must set handbrakes and, when applicable, leave gears engaged for parking. Operation of all aircraft equipment will be the responsibility of the aircraft loadmaster.

1-8. Vehicle Location

Vehicle locations in the tiedown diagrams of this manual are typical. Vehicle location in the aircraft may be changed to another location provided adequate restraint is maintained, structural floor limitations are complied with and weight and balance considerations are satisfied. Also, variations to each configuration to allow other vehicle combinations are authorized to permit more flexibility in loading planning.

CAUTION

The tiedown pattern on some of the items portrayed in specific loads may not reflect current tiedown instructions, i.e., the prohibition against more than half the total number of tiedowns attached to axles. All materiel loaded on the aircraft will be restrained in accordance with instructions contained in the current TO IC-5A-9.

1-9. Restraint

a. Criteria.

- | | |
|-----------------|------|
| (1) Forward | 3.0g |
| (2) Aft | 1.5g |
| (3) Lateral | 1.5g |
| (4) Vertical-Up | 2.0g |

b. The following tiedown equipment is available on each C-5 aircraft.

- (1) MB-1 (10,000 pounds) capacity 125 devices and chains
- (2) MB-2 (25,000 pounds) capacity 75 devices and chains

- (3) CGU-1B (5,000 pounds) capacity devices
- c. Procedures.

(1) Procedures for restraining material, to include palletized loads, are contained in TO 1C-5A-9 and TM 55-450-15.

(2) Although all materials stretch in direct proportion to the applied load, different materials, have different rates of stretch. Nylon devices stretch more readily than steel and, under tension, almost immediately permit the steel device to assume the majority of the load. Therefore, when two or more tiedown devices are required to restrain a unit of cargo for a given load direction, the devices must be of the same type and the ties must be of approximately of the same length.

(3) Spring-mounted vehicles, such as automobiles or small and medium trucks, must be tied down using points on the frame of the vehicle. Do not attach more than half the total number of tiedowns required to the axles of the trucks, carriers, and similar vehicles.

(4) If the center-of-gravity is remote from the geometric center of the load, add an additional tiedown on each side of the load so that the center-of-gravity will be between a pair of tiedowns.

(5) The aircraft commander has final responsibility on positioning of loads within the cargo compartment, restraint, and weight and balance.

CAUTION

Tiedown hook points must be positioned so as not to come in contact with the tiedown pan or structural damage might occur.

1-10. Cargo Space

On many loads there remains sufficient floor space to permit the loading of general cargo in addition to the equipment items. Tiedown diagrams indicate this available floor space which should be used providing that restraint is available and the allowable cargo load (ACL) is not exceeded.

1-11. Troop Passenger Spaces

A troop compartment with comfort facilities is located in the upper aft portion of the fuselage above the cargo compartment and provides seating for 73 passengers and 2 loadmasters. Access is provided via a folding stowable stairway.

1-12. Worktime

The times required for the various operations covered in this manual are for general guidance. Actual times may vary, depending on existing conditions and availability of personnel.

CHAPTER 2

TRANSPORT PROCEDURES

Section I. LOAD 2-1: TWO TRUCK, CARGO 3/4-TON W/ WN M37B1; THREE LAUNCHER, ZERO LENGTH GMXM78E2; ONE RADAR SET AMPQ-34 TRAILER MOUNTED; ONE TRUCK, CARGO 2 1/2-TON W/ WN M36A2, W/ PALLET LOADING AND STORAGE XM1E1; ONE TRUCK, CARGO 2 1/2-TON W/ WN, M36A2, W/ LOADER TRANSPORTER GM XM501E2; ONE LOADER, GUIDED MISSILE, TRAILER MOUNTED XM1E1; ONE TRUCK, CARGO 2 1/2-TON W/ WN M36A2 W/ BCC/ AN/ TSW; ONE TRUCK, VAN SHOP 2 1/2-TON M109; ONE RADAR SET AMPQ-39 TRAILER MOUNTED; ONE TRAILER, CARGO 1 1/2-TON M105A2; ONE TRUCK, UTILITY 1/4-TON M151A1; ONE TRAILER, CARGO 1/4-TON M416 (FIG 2-1)

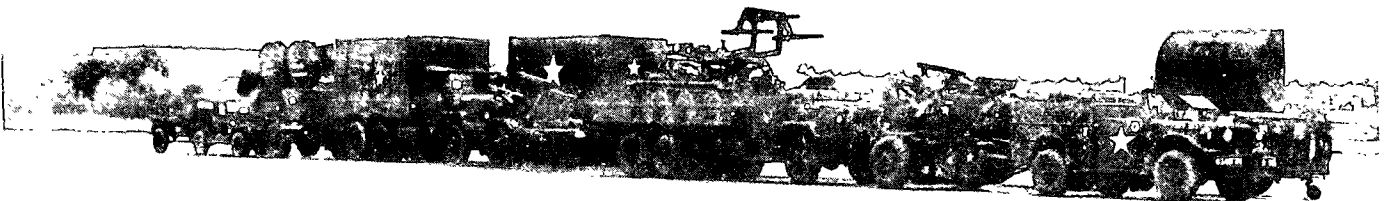


Figure 2-1. Vehicle lineup for load 2-1.

2-1. Airplane Loading Configuration

Airplane is level kneeled with aft ramp in drive-in mode.

2-2. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-3. Materiel

Two pieces ½-by-2-inch by 4-foot parking shoring to be positioned under landing gear of item 3 and the lunette of item 13.

2-4. Personnel and Duties

Twelve men load all vehicles into the airplane in 9 minutes. One man drives the vehicle and one man signals directions during loading.

2-5. Loading Instructions

Drive each vehicle into the cargo compartment over the aft ramp and park each vehicle at the station prescribed in the tiedown diagram (fig 2-2). Position shoring under the landing gear of item 3 and the lunette of item 13.

2-6. Tiedown (See Caution in Paragraph 1-9 c)

a. Personnel and Time. Eight men tie down the load in 30 minutes.

b. Procedure. Tie down the items in accordance with the instructions in tiedown data table 2-1 and figures 2-2 and 2-3.

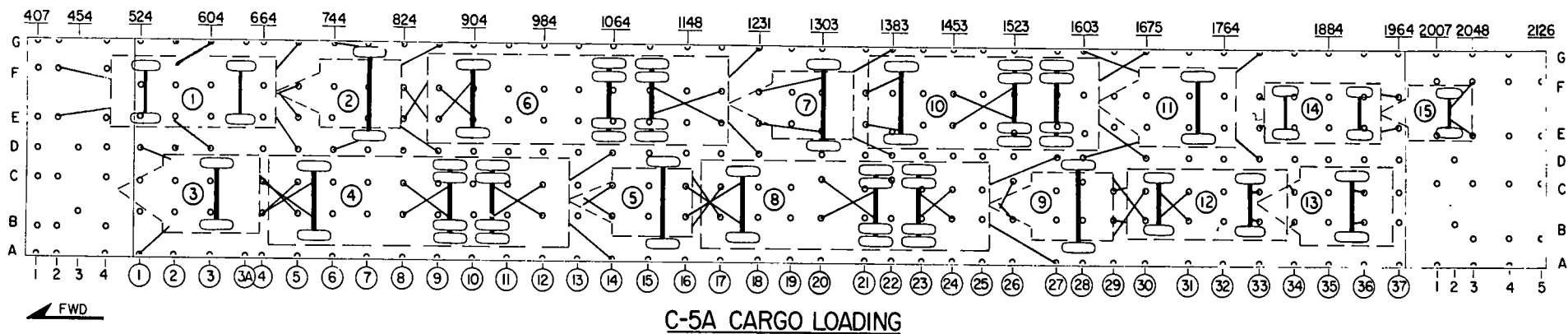
2-7. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane level kneeled.

2-8. Offloading Instructions

a. Offload the vehicles over the forward ramp.

b. Twelve men offload all vehicles in 5 minutes.



C-5A CARGO LOADING

LOAD 2-1

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	STA			
1 TRUCK, CARGO, 3/4-TON, W/WM, M37B1	FWD	FRONT	490	5,820	825	
2 LAUNCHER, ZERO LENGTH GM, XM78B3	FWD	REAR	820	4,300	879	
3 RADAR SET AMPO-34, TRAILER MOUNTED	FWD	FRONT	498	4,870	1,154	SHORING REQUIRED
4 TRUCK, CARGO, 2 1/2-TON, W/WM, M36A2, W/PALLET, LOADING AND STORAGE, XM1E1	FWD	FRONT	670	17,260	2,391	
5 LAUNCHER, ZERO LENGTH GM, XM78B3	FWD	REAR	1155	4,300	879	
6 TRUCK, CARGO, 2 1/2-TON, W/WM, M36A2, W/LOADER TRANSPORTER, GM, XM501E2	FWD	FRONT	850	20,330	2,745	
7 LOADER, GUIDED MISSILE, TRAILER MOUNTED, XM1E1	FWD	REAR	1338	4,594	790	
8 TRUCK, CARGO, 2 1/2-TON, W/WM, M36A2, W/BCC/AMTSW	FWD	FRONT	1165	23,150	2,708	
9 LAUNCHER, ZERO LENGTH GM, XM78B3	FWD	REAR	1638	4,300	879	
10 TRUCK, VAN SHOP, 2 1/2-TON, M109	FWD	FRONT	1354	5,770	1,978	
11 RADAR SET AMPO-39, TRAILER MOUNTED	FWD	REAR	1776	9,300	1,170	
12 TRUCK, CARGO, 3/4-TON, W/WM, M37B1	FWD	FRONT	1654	5,820	846	
13 TRAILER, CARGO, 1 1/2-TON, M105A2	FWD	REAR	1956	2,750	781	
14 TRUCK, UTILITY, 1/4-TON, M151A1	FWD	FRONT	1810	2,350	370	
15 TRAILER, CARGO, 1/4-TON, M116	FWD	REAR	2045	590	170	
TOTALS				125,304	18,565	

62

Figure 2-2. Tiedown diagram for load 2-1.

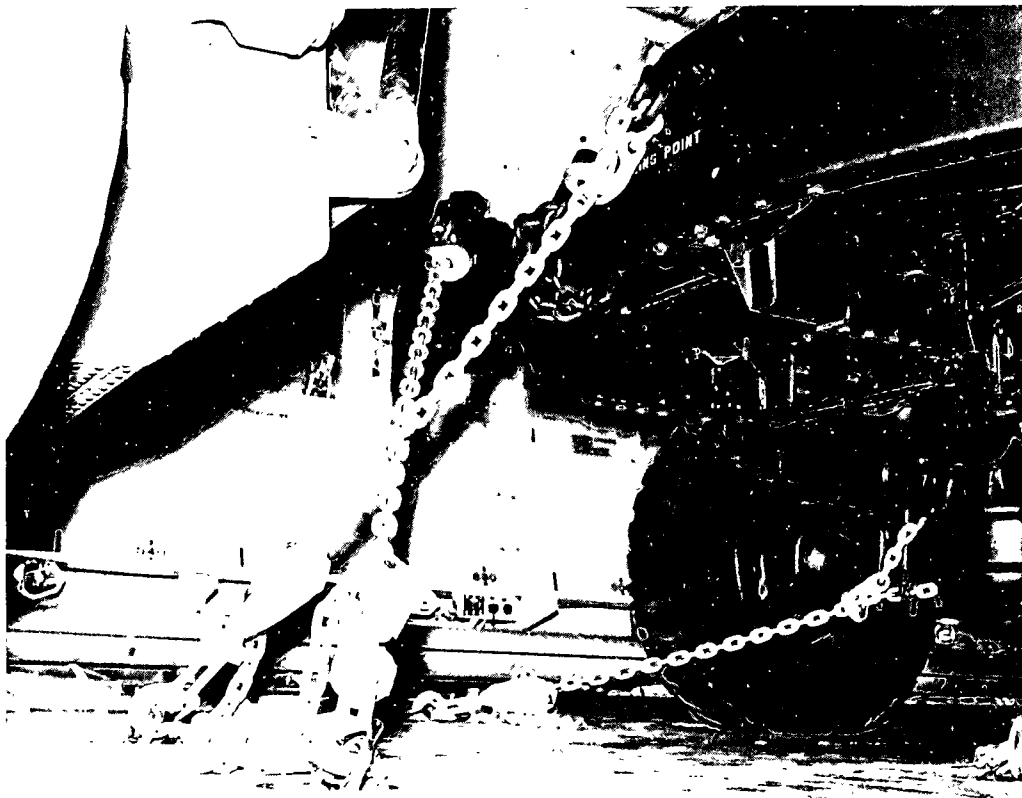


Figure 2-3. Tiedown for M36A2 truck for load 2-1.

Table 2-1. Tiedown Data for Load 2-1

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
1	E2	1	10,000	Clevis at bumper LH side
	F2	1	10,000	Clevis at bumper RH side
	D3	1	10,000	Tiedown ring on frame LH side
	G3	1	10,000	Tiedown ring on frame RH side
	D5	1	10,000	Clevis at bumperette LH side
	G5	1	10,000	Clevis at bumperette RH side
2	E5	1	10,000	Tow hitch
	F5	1	10,000	Tow hitch
	D6	1	10,000	Holes in wheel rim LH side
	G6	1	10,000	Holes in wheel rim RH side
	D9	1	10,000	Rear frame LH side
	G9	1	10,000	Rear frame RH side
3	A1	1	10,000	Front frame LH side
	D1	1	10,000	Front frame RH side
	B5	1	10,000	Towing shackle RH side
	C5	1	10,000	Towing shackle LH side
4	B4	1	25,000	Front axle RH side
	C4	1	25,000	Front axle LH side
	B8	1	25,000	Front rear axle RH side
	C8	1	25,000	Front rear axle LH side
	B12	1	25,000	Rear axle RH side
	C12	1	25,000	Rear axle LH side
	A14	1	25,000	Clevis at bumperette LH side
	D14	1	25,000	Clevis at bumperette RH side

Table 2-1—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
5	B14	1	10,000	Lower hitch support RH side
	C14	1	10,000	Lower hitch support LH side
	B17	1	10,000	Rear support RH side
	C17	1	10,000	Rear support LH side
6	E8	1	25,000	Clevis at bumper RH side
	F8	1	25,000	Clevis at bumper LH side
	E9	1	25,000	Front axle RH side
	F9	1	25,000	Front axle LH side
	E17	1	25,000	Rear axle RH side
	F17	1	25,000	Rear axle LH side
	D18	1	25,000	Clevis at bumperette LH side
	G18	1	25,000	Clevis at bumperette RH side
7	E18	1	10,000	Axle LH side
	F18	1	10,000	Axle RH side
	D22	1	10,000	Lifting ring LH side
	G22	1	10,000	Lifting ring RH side
8	B16	1	25,000	Front axle RH side
	C16	1	25,000	Front axle LH side
	B20	1	25,000	Front rear axle RH side
	C20	1	25,000	Front rear axle LH side
	B24	1	25,000	Rear axle RH side
	C24	1	25,000	Rear axle LH side
	A27	2	25,000	Clevis at bumperette LH side
	D27	2	25,000	Clevis at bumperette RH side
9	B26	1	10,000	Lower hitch support RH side
	C26	1	10,000	Lower hitch support LH side
	B30	1	10,000	Rear support RH side
	C30	1	10,000	Rear support LH side
10	E21	1	25,000	Front axle LH side
	F21	1	25,000	Front axle RH side
	E24	1	25,000	Front rear axle RH side
	F24	1	25,000	Front rear axle LH side
	D30	1	25,000	Towing eye LH side
	G30	1	25,000	Towing eye RH side
11	D28	1	10,000	Front lifting eye LH side
	G28	1	10,000	Front lifting eye RH side
	D33	1	10,000	Rear lifting eye LH side
	G33	1	10,000	Rear lifting eye RH side
12	B29	1	10,000	Clevis at bumper LH side
	C29	1	10,000	Clevis at bumper RH side
	B31	1	10,000	Front axle RH side
	C31	1	10,000	Front axle LH side
	B33	1	10,000	Rear axle LH side
	C33	1	10,000	Rear axle RH side
13	B34	1	10,000	Lunette LH side
	C34	1	10,000	Lunette RH side
	B36	1	10,000	Axle LH side
	C36	1	10,000	Axle RH side
14	E33	1	10,000	Clevis at bumper LH side
	F33	1	10,000	Clevis at bumper RH side
	E37	1	10,000	Clevis at bumperette LH side
	F37	1	10,000	Clevis at bumperette RH side
15	E3	1	10,000	Axle LH side
	(aft ramp)			Axle RH side
	F3	1	10,000	
	(aft ramp)			

Section II. LOAD 2-2: ONE TRUCK, UTILITY ¼-TON M151A1; ONE TRAILER, UTILITY ¼-TON M416; ONE RADAR SET, AMPQ-39 TRAILER MOUNTED; ONE TRUCK, CARGO, 2½-TON W / WN M36A2 W / 45 KW GENERATOR; ONE CW AQUISITION RADAR, AMPQ-34 TRAILER MOUNTED; ONE TRUCK, CARGO, 2½-TON W / WN M36A2 W / HAWK CABLES AND AFCC; TWO LAUNCHER, ZERO LENGTH, GM XM78E3; ONE TRUCK, CARGO, 2½-TON W / WN M36A2 W / LOADER M501E2; ONE GENERATOR SET, 45 KW, TRAILER MOUNTED; ONE TRUCK, CARGO, 2½-TON W / WN M36A2 W / LOADER SM1 (FIG 2-4)

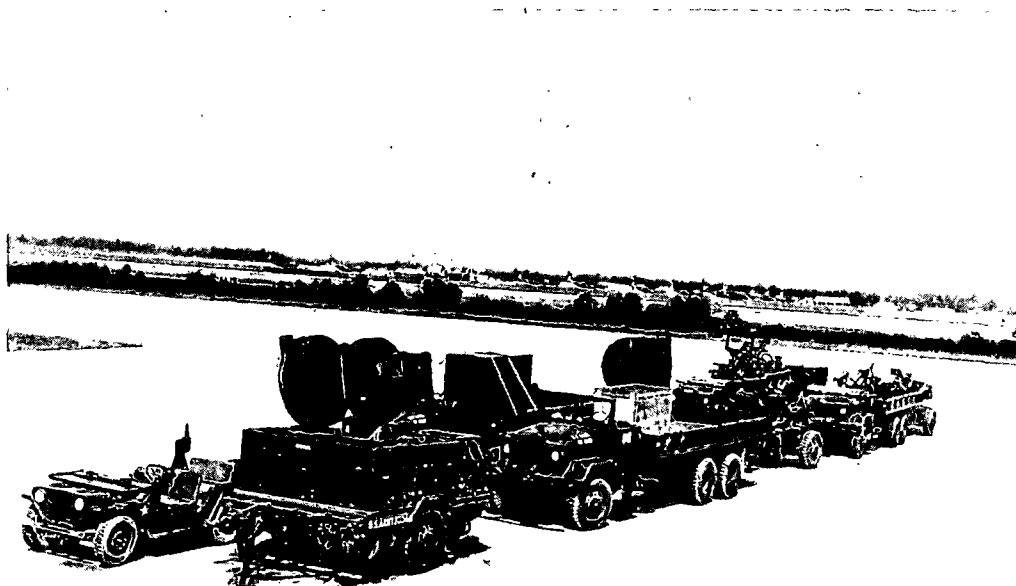


Figure 2-4. Vehicle lineup for load 2-2.

2-9. Airplane Loading Configuration

Airplane level kneeled and aft ramp in drive-in mode.

2-10. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-11. Materiel

One piece ½-by 12-inch by 4-foot parking shoring to be positioned under loading gear of item 3.

2-12. Personnel and Duties

Ten men load all vehicles into the airplane in 10 minutes. One man drives the vehicle and one man signals directions during loading.

2-13. Loading Instructions

Drive each vehicle into the cargo compartment over the aft ramp as shown in figures 2-5 and 2-6 and park each vehicle at station prescribed in the tiedown diagram (fig 2-7). Position shoring under the landing gear of item 3.

2-14. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and time.* Eight men tie down the load in 30 minutes.

b. *Procedure.* Tiedown the items in accordance with the instructions in tiedown data table 2-2 and tiedown diagram (fig 2-7).

2-15. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane level kneeled.

2-16. Offloading Instructions

a. Offload the vehicles over the forward ramp as shown in figures 2-8 and 2-9.

b. Ten men offload all vehicles in 5 minutes.

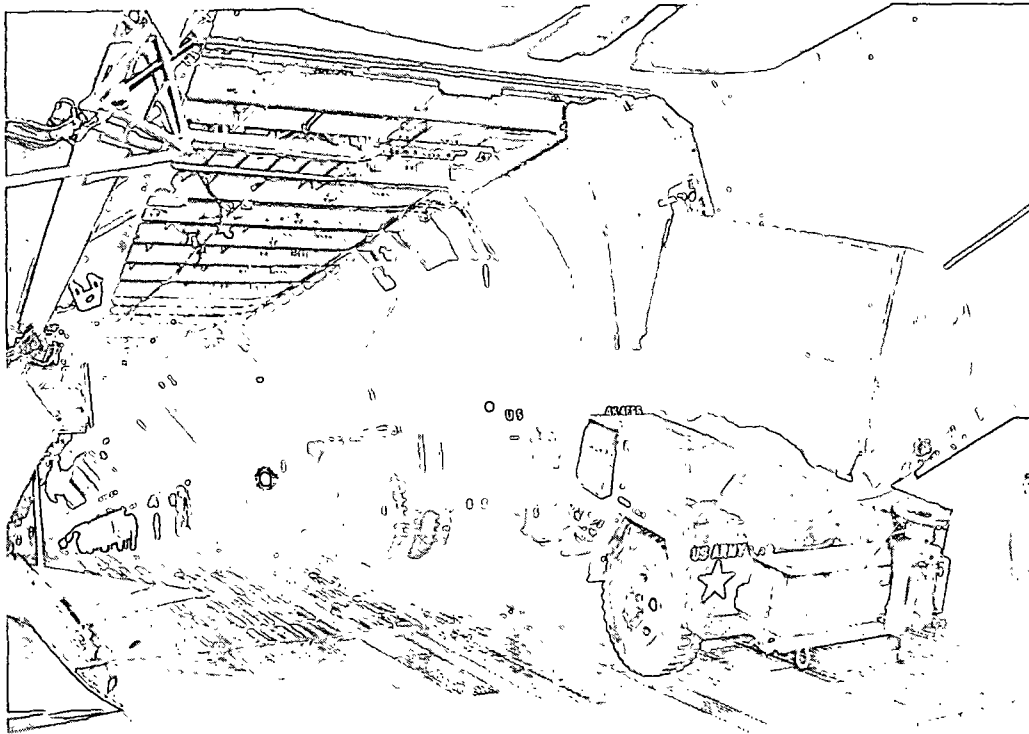


Figure 2-5. Loading M36A2 truck and AMPQ-34 radar over aft ramp.

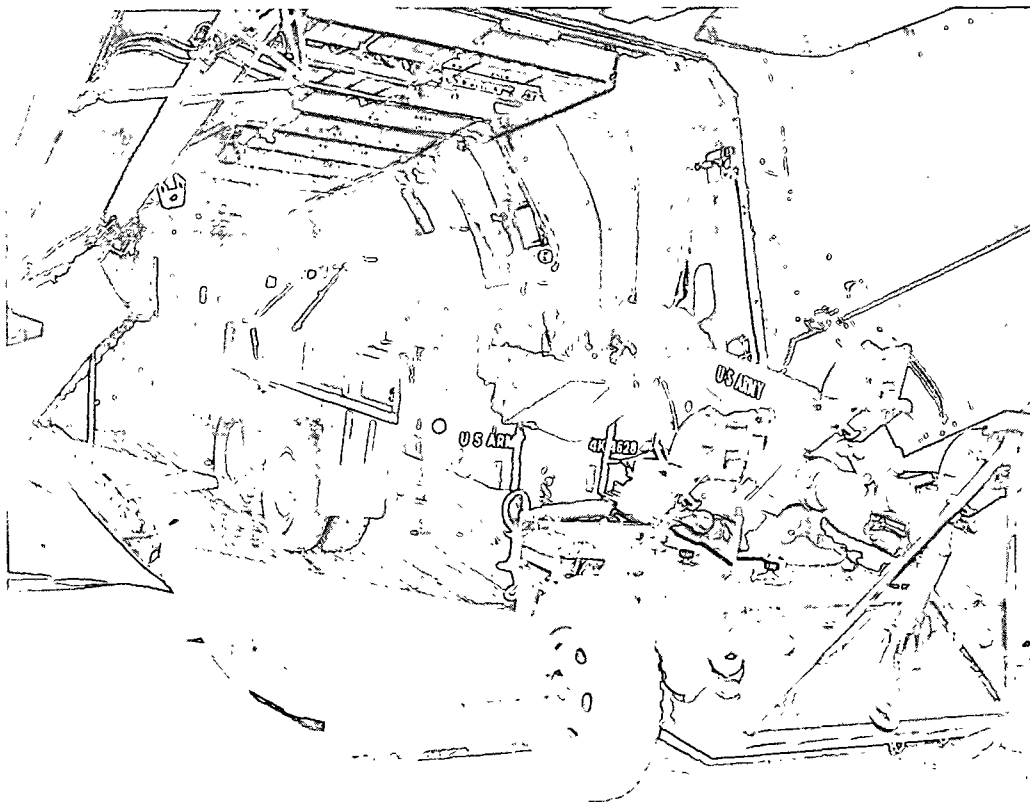
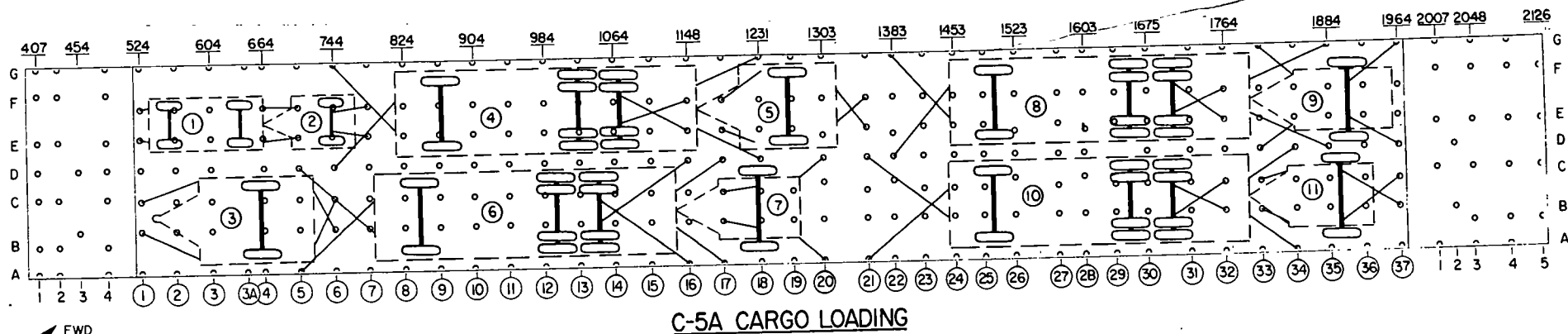


Figure 2-6. Loading M36A2 truck and XM78E3 launcher over aft ramp.



LOAD 2-2

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP RP STA	WEIGHT	CUBE	REMARKS
1 TRUCK, UTILITY, 3/4-TON, M151A1	FWD	FRONT	535	2,350	370
2 TRAILER, UTILITY, 3/4-TON, M21A	FWD	REAR	770	590	170
3 RADAR SET, AMPQ-39 TRAILER MOUNTED	FWD	REAR	720	9,300	1,405
4 TRUCK, CARGO, 2 1/2-TON, W/WM, M36A2, W/45, KW GENERATOR	FWD	FRONT	815	19,640	2,391
5 CW ACQUISITION RADAR, AMPQ-34, TRAILER MOUNTED	FWD	REAR	1320	4,690	1,350
6 TRUCK, CARGO, 2 1/2-TON, W/WM, M36A2, W/HAWK CABLES AND AFCC	FWD	FRONT	790	16,595	1,546
7 LAUNCHER, ZERO LENGTH, GM, XM78C3	FWD	REAR	1275	4,300	879
8 TRUCK, CARGO, 2 1/2-TON, W/WM, M36A2, W/LOADER M501E2	FWD	FRONT	1448	20,330	1,546
9 GENERATOR SET, 45KW, TRAILER MOUNTED	FWD	REAR	1960	8,190	800
10 TRUCK, CARGO, 2 1/2-TON W/WM, M36A2, W/LOADER XM1	FWD	FRONT	1445	17,260	1,546
11 LAUNCHER, ZERO LENGTH, GM, XM78C3	FWD	REAR	1930	4,300	879
TOTALS			107,545	12,882	

50

Figure 2-7. Tiedown diagram for load 2-2.

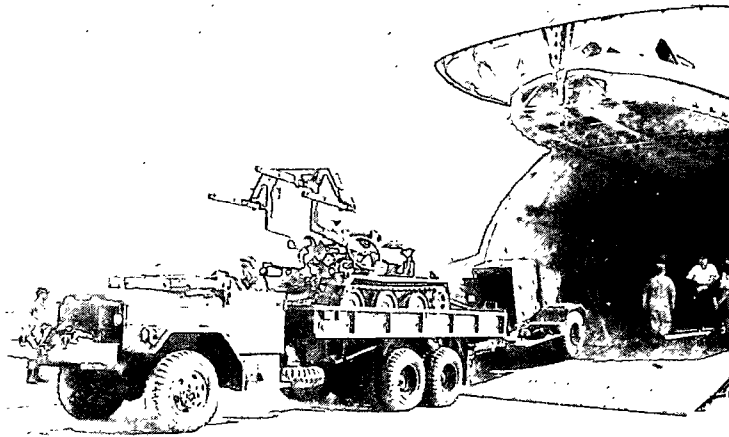


Figure 2-8. Offloading M36A2 truck W / M501E2 loader and trailer mounted 45 KW generator over forward ramp.

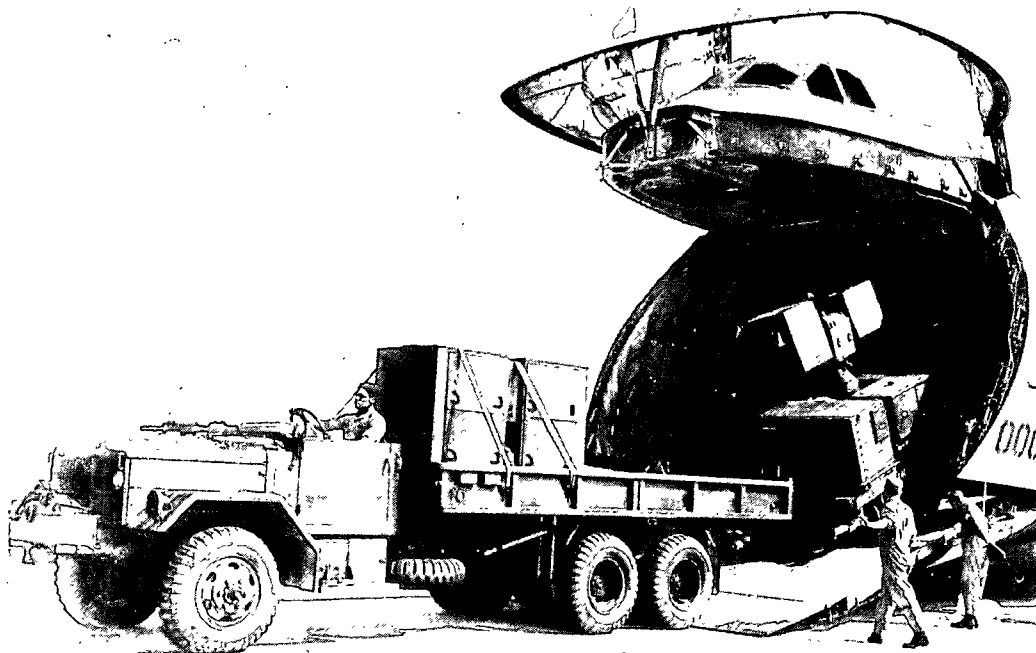


Figure 2-9. Offloading M36A2 truck W / 45KW generator and AMPQ-39 radar over forward ramp.

Table 2-2. Tiedown Data for Load 2-2

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E1	1	10,000	Clevis at bumper LH side
	F1	1	10,000	Clevis at bumper RH side
	E5	1	10,000	Clevis at bumperette LH side
	F5	1	10,000	Clevis at bumperette RH side
2	E7	1	10,000	Axle LH side
	F7	1	10,000	Axle RH side
3	B1	1	10,000	Front lifting eye LH side
	C1	1	10,000	Front lifting eye RH side
	B6	1	25,000	Rear lifting eye RH side
	C6	1	25,000	Rear lifting eye LH side
4	D6	2	25,000	Clevis at bumper RH side
	G6	2	25,000	Clevis at bumper LH side
	E16	1	25,000	Rear axle RH side
	F16	1	25,000	Rear axle LH side
	D18	1	25,000	Rear clevis LH side
	G18	1	25,000	Rear clevis RH side
5	E17	1	10,000	Frame LH side
	F17	1	10,000	Frame RH side
	E21	1	25,000	Towing shackle RH side
	F21	1	25,000	Towing shackle LH side
6	A5	2	25,000	Clevis at bumper RH side
	D5	2	25,000	Clevis at bumper LH side
	A16	2	25,000	Rear axle RH side
	D16	2	25,000	Rear axle LH side
	A17	1	25,000	Rear clevis LH side
	C17	1	25,000	Rear clevis RH side
7	B17	1	10,000	Axle LH side
	C17	1	10,000	Axle RH side
	A20	1	25,000	Rear frame LH side
	D20	1	25,000	Rear frame RH side
8	D22	2	25,000	Clevis at bumper RH side
	G22	2	25,000	Clevis at bumper LH side
	E32	1	25,000	Rear axle RH side
	F32	1	25,000	Rear axle LH side
	D35	2	25,000	Rear clevis LH side
	G35	2	25,000	Rear clevis RH side
9	D33	1	10,000	Front frame LH side
	G33	1	10,000	Front frame RH side
	D37	1	25,000	Axle LH side
	G37	1	25,000	Axle RH side
10	A21	2	25,000	Clevis at bumper RH side
	D21	2	25,000	Clevis at bumper LH side
	B32	1	25,000	Rear axle RH side
	C32	1	25,000	Rear axle LH side
	A34	1	25,000	Rear clevis LH side
	D34	1	25,000	Rear clevis RH side
11	B33	1	10,000	Front frame LH side
	C33	1	10,000	Front frame RH side
	B37	1	25,000	Axle RH side
	C37	1	25,000	Axle LH side

Section III. LOAD 2-3: ONE TRUCK, MAINTENANCE $\frac{3}{4}$ -TON TRUCK M201; ONE GUN, FA, SP, 175MM, M107; ONE TANK, COMBAT, 105MM, M60A1; ONE TRUCK, CARGO, $1\frac{1}{4}$ -TON, XM561 (FIG 2-10)

NOTE

This load configuration reflects design aircraft load and may require altering for reduced ACL.

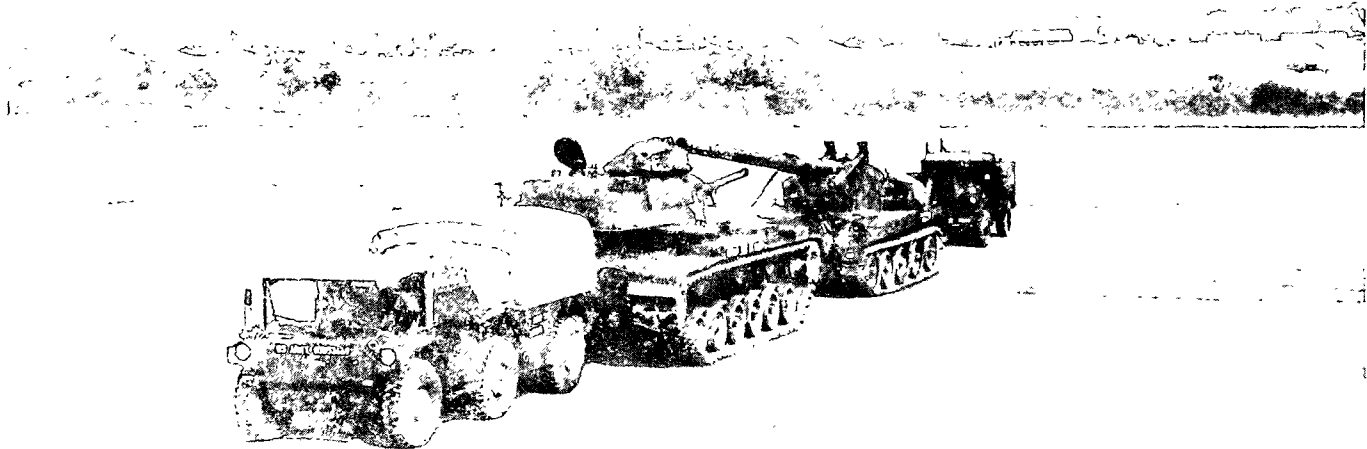


Figure 2-10. Vehicle lineup for load 2-3.

2-17. Airplane Loading Configuration

Airplane forward kneeled and forward ramp in drive-in mode.

NOTE

Load can be loaded over aft ramp with airplane in aft kneel mode. The M107 gun barrel must be in the depressed position.

2-18. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6. M107 barrel is placed in travel position.

2-19. Materiel

Sufficient rolling and parking, shoring to lay a 24-inch wide path 90 feet long in the airplane for each driveway as shown in figure 2-11. A lesser amount of shoring is required for this operation if the shoring is "leap-frogged" as the tracked vehicles are moved into the airplane. A double layer of parking shoring will be required for the M60 tank.

2-20. Personnel and Duties

Six men load each tracked vehicle into the airplane in 5 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in

positioning shoring. The two trucks can be loaded by four men in 5 minutes.

2-21. Loading Instructions

- a. Back the M201 into the cargo compartment and park with front of vehicle at station 1720.
- b. Position shoring on each driveway from forward ramp toes to station 1035.
- c. Back the M107 into the cargo compartment and park with front of vehicle at station 1445.
- d. Back the M60A1 into cargo compartment and park with front of vehicle at station 1035.
- e. Back the SM561 into the cargo compartment and park with front of vehicle at station 660.

2-22. Tiedown (See Caution in Paragraph 1-9 c)

- a. *Personnel and time.* Eight men tie down the load in 35 minutes.
- b. *Procedure.* Tie down all items in accordance with the instructions in the tiedown data table 2-3 and figures 2-12 through 2-17.

2-23. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane forward kneeled.

2-24. Offloading Instructions

- a. Drive the XM561 from the airplane over the forward ramp.

b. Position snoring on each driveway from station 1035 to the forward ramp toes.

c. Drive the M60A1 from the airplane.

d. Drive the M107 from the airplane.

e. Remove the shoring and drive the M201 from the airplane.

f. Six men offload the load in 4 minutes.

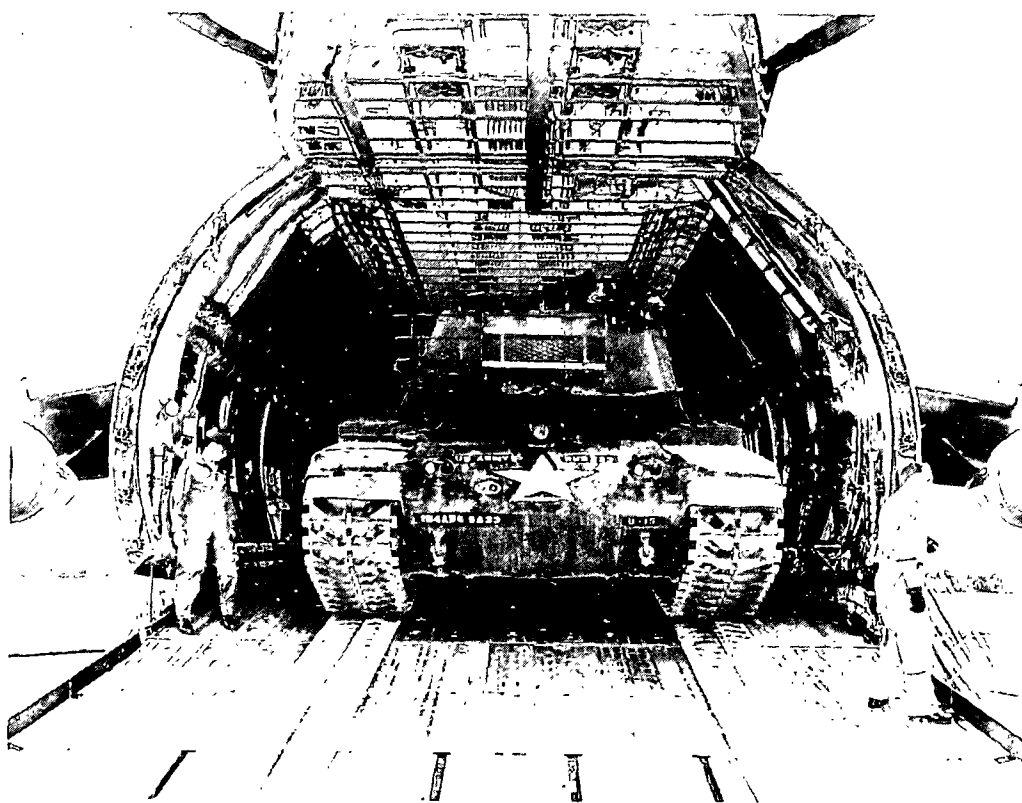
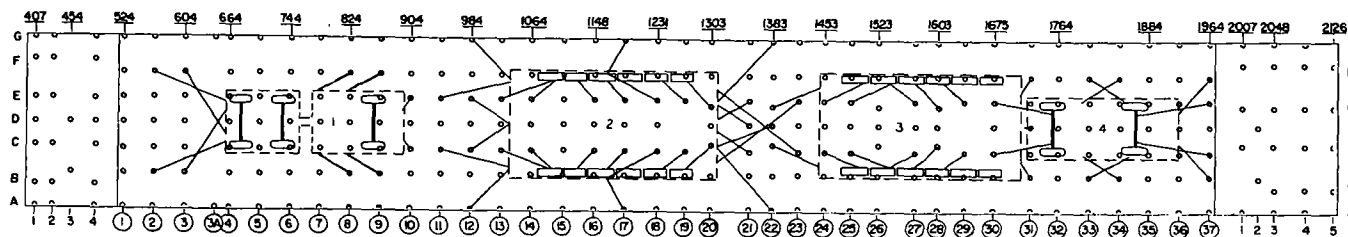


Figure 2-11. Rolling shoring positioned for load 2-3.



C-5A CARGO LOADING

LOAD 2-3

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP	WEIGHT	CUBE	REMARKS
1 TRUCK, CARGO, 1 1/4-TON, XM561	FWD	FRONT	660	7,640	1,178
2 TANK, CBT, 105MM, M60A1	FWD	FRONT	1,035	105,500	3,472 SHORING REQUIRED
3 GUN, FA, SP, 175MM, M107	AFT	FRONT	1,445	61,200	3,683 SHORING REQUIRED-IN FIRING BATTERY
4 TRUCK, MAINT, 3/4 TON, 4x4, M201	FWD	FRONT	1,720	6,710	900
TOTALS				181,050	9,233

90

Figure 2-12. Tiedown diagram for load 2-3.

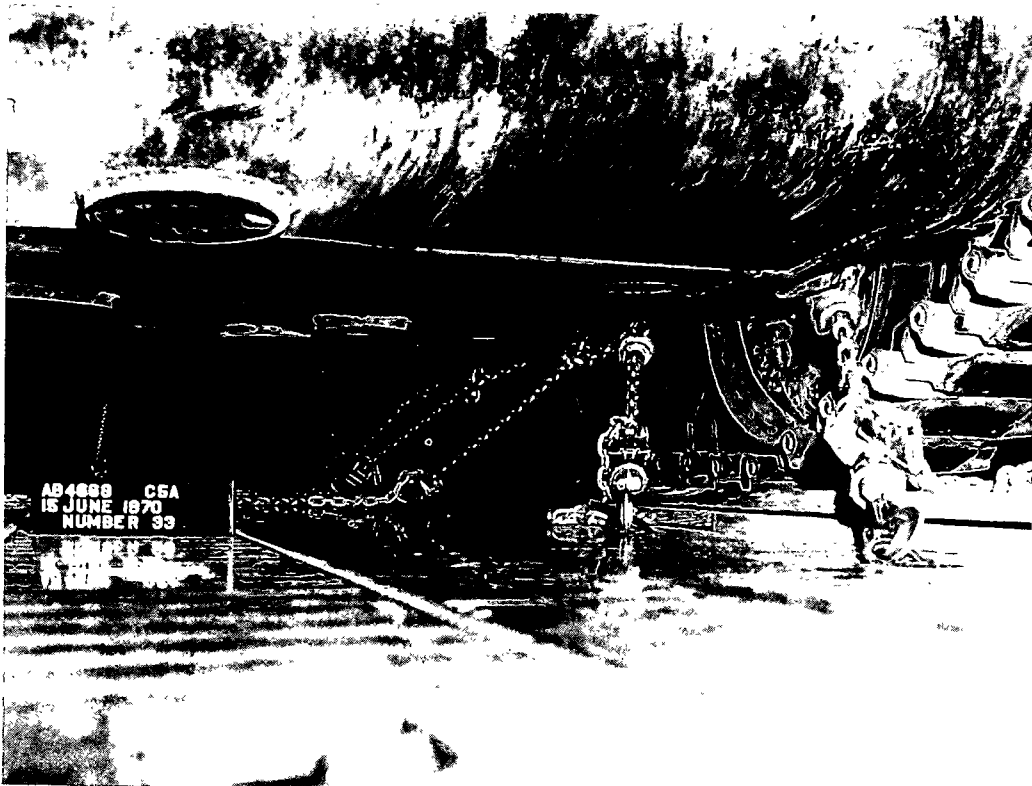


Figure 2-13. Tiedown of M60 tank for load 2-3.

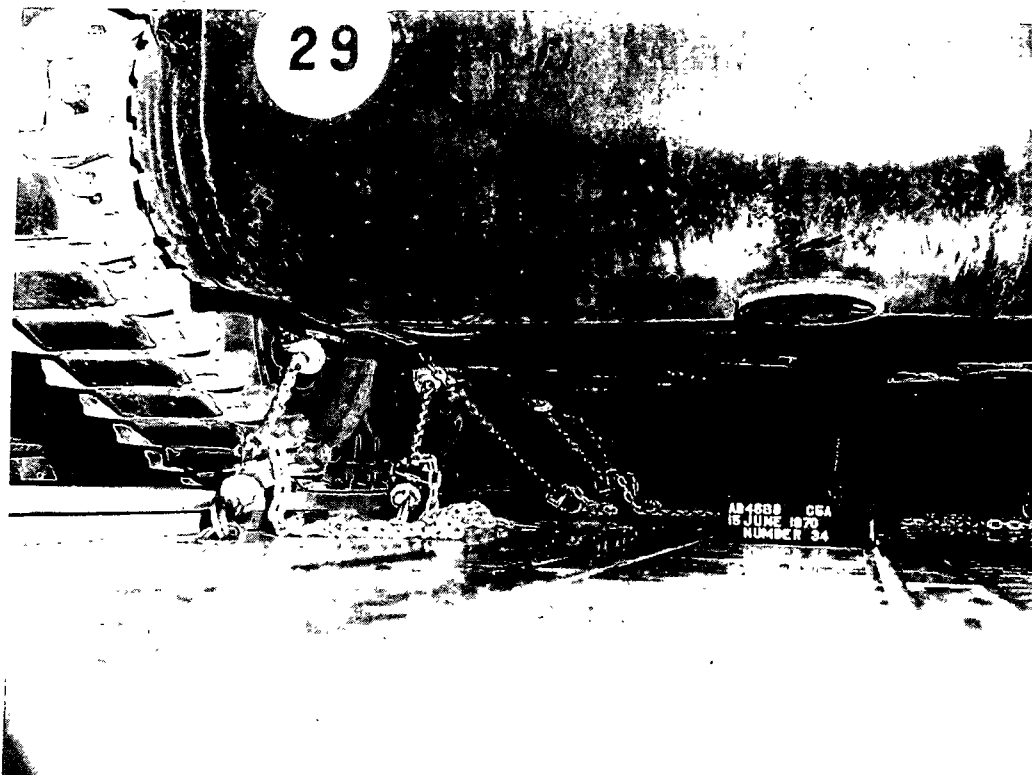


Figure 2-14. Tiedown of M60 tank for load 2-3.

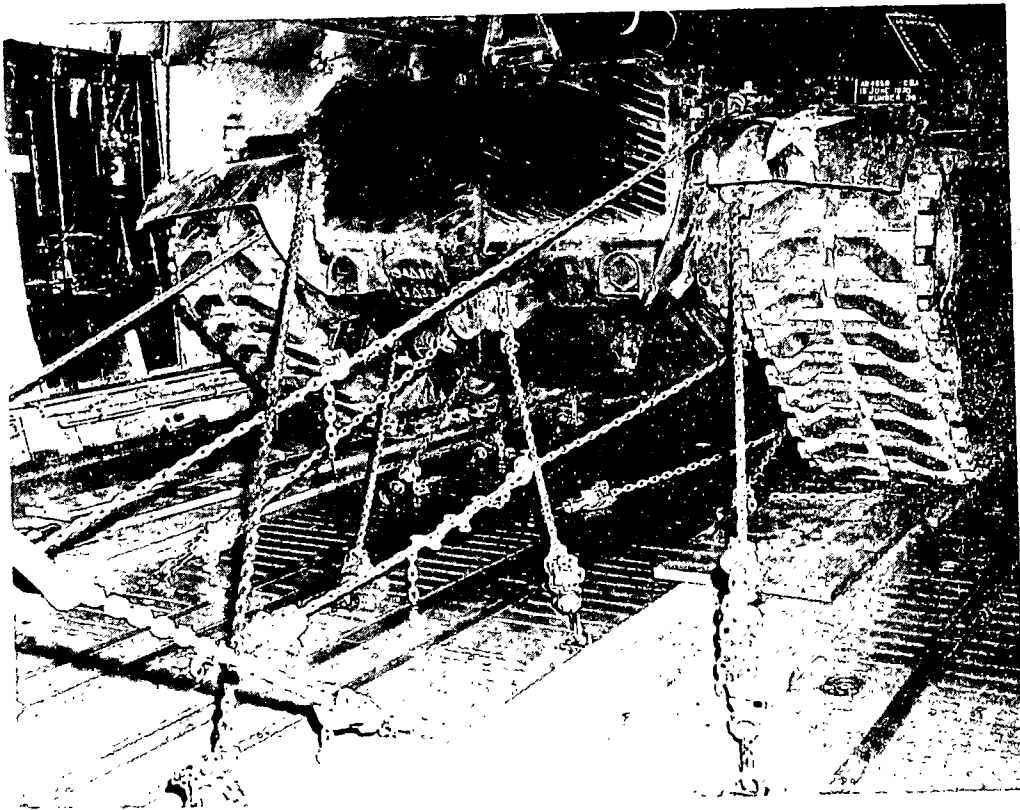


Figure 2-15. Tiedown of M60 tank for load 2-3.

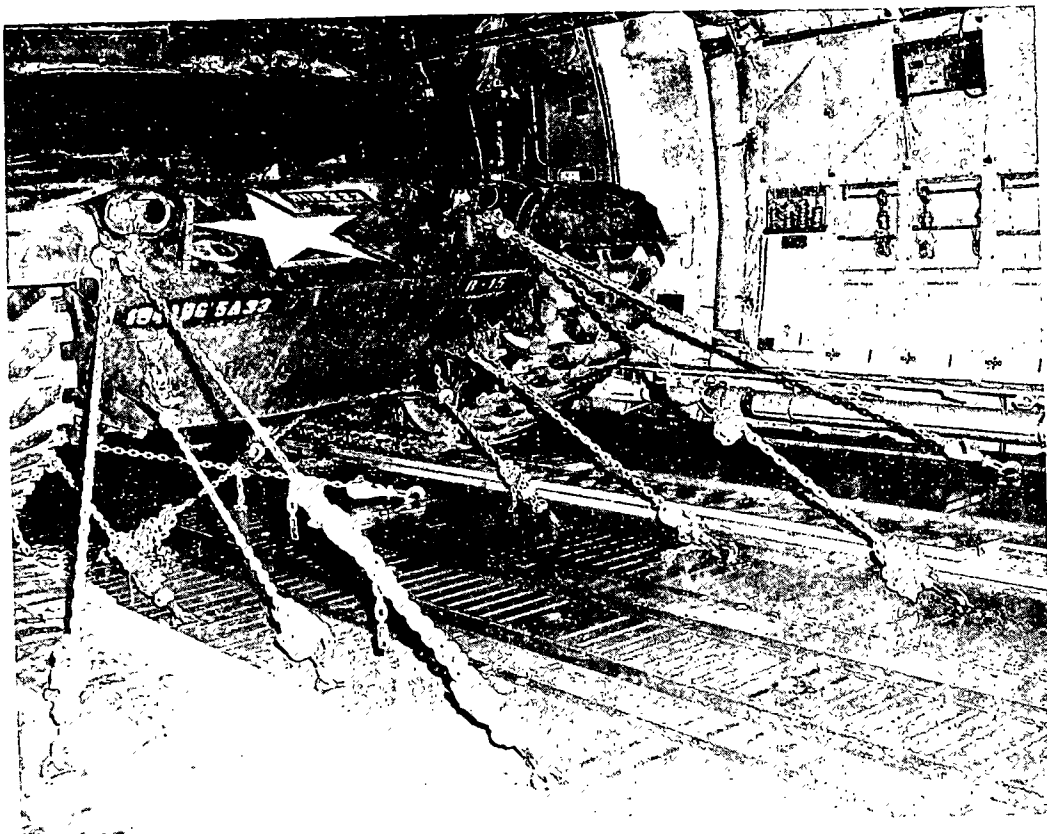


Figure 2-16. Tiedown of M60 tank for load 2-3.

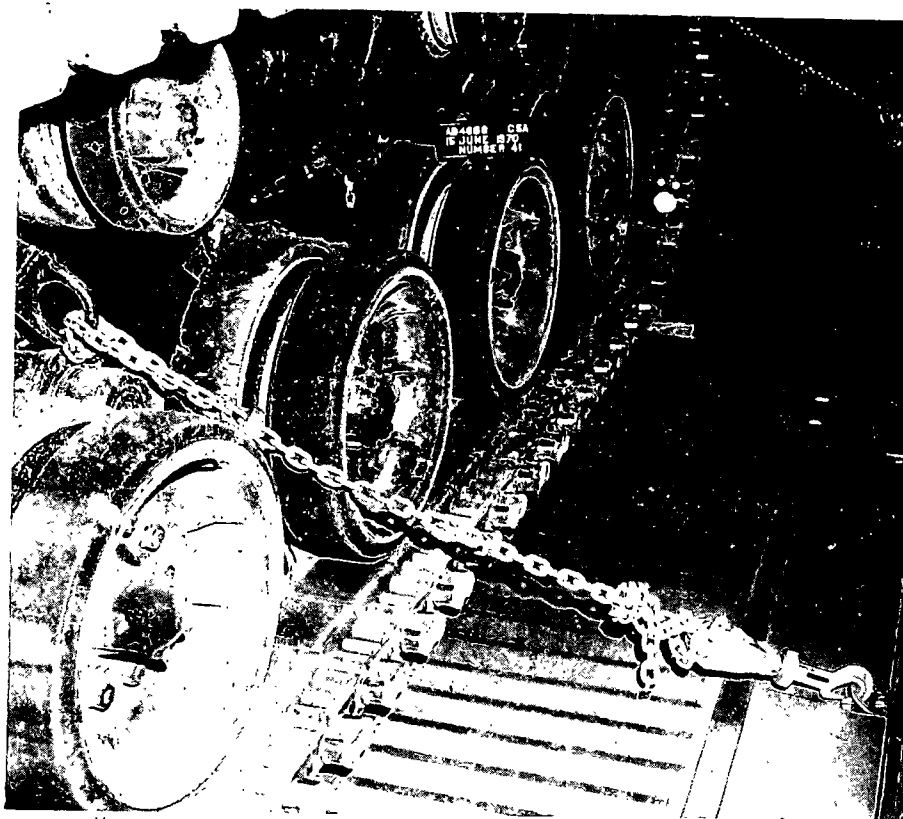


Figure 2-17. Tiedown of M60 tank for load 2-3.

Table 2-3. Tiedown Data for Load 2-3

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
1	B2	1	10,000	Ring below windshield LH side
	F2	1	10,000	Ring below windshield RH side
	B3	1	10,000	Front clevis RH side
	F3	1	10,000	Front clevis LH side
	B8	1	10,000	Ring on cargo bed LH side
	F8	1	10,000	Ring on cargo bed RH side
	B9	1	10,000	Ring on cargo bed LH side
	F9	1	10,000	Ring on cargo bed RH side
	C10	1	10,000	Rear clevis LH side
	E10	1	10,000	Rear clevis RH side
2	C11	2	25,000	Lifting eye LH side
	E11	2	25,000	Lifting eye RH side
	C12	1	25,000	Towing eye LH side
	E12	1	25,000	Towing eye RH side
	A12	1	25,000	Lifting eye LH side
	F12	1	25,000	Lifting eye RH side
	C13	1	25,000	First wheel axle LH side
	E13	1	25,000	First wheel axle RH side
	C14	1	25,000	First wheel axle LH side
	E14	1	25,000	First wheel axle RH side
	C16	1	25,000	Ring above second wheel axle LH side
	E16	1	25,000	Ring above second wheel axle RH side
	C17	1	25,000	Third wheel axle LH side
	E17	1	25,000	Third wheel axle RH side
	A17	1	25,000	Ring above third wheel axle LH side
	G17	1	25,000	Ring above third wheel axle RH side
	C18	1	25,000	Ring above third wheel axle LH side
	E18	1	25,000	Ring above third wheel axle RH side
	C19	1	25,000	Fifth wheel axle LH side

Table 2-3—Continued

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
2	E19	1	25,000	Fifth wheel axle RH side
	C20	1	25,000	Sixth wheel axle LH side
	E20	1	25,000	Sixth wheel axle RH side
	C21	1	25,000	Pintle bracked LH side
	E21	1	25,000	Pintle bracked RH side
	D21	1	25,000	Tiedown ring RH side
	D22	2	25,000	Tiedown ring LH side
	A22	2	25,000	Tiedown ring LH side
	F22	2	25,000	Tiedown ring RH side
	C23	2	25,000	Lifting eye RH side
	E23	2	25,000	Lifting eye LH side
3	C22	1	25,000	Lifting eye LH side
	E22	1	25,000	Lifting eye RH side
	C24	1	25,000	First wheel axle LH side
	E24	1	25,000	First wheel axle RH side
	C25	1	25,000	Second wheel axle LH side
	E25	1	25,000	Second wheel axle RH side
	C27	1	25,000	Second wheel axle LH side
	E27	1	25,000	Second wheel axle RH side
	C28	1	25,000	Third wheel axle LH side
	E28	1	25,000	Third wheel axle RH side
	C29	1	25,000	Fourth wheel axle LH side
	E29	1	25,000	Fourth wheel axle RH side
	B31	1	25,000	Dozer support arm LH side
	F31	1	25,000	Dozer support arm RH side
	D31	1	25,000	Tow hitch
4	C30	1	10,000	Front axle LH side
	E30	1	10,000	Front axle RH side
	B33	1	10,000	Frame tiedown ring LH side
	E33	1	10,000	Frame tiedown ring RH side
	B34	1	10,000	Frame tiedown ring LH side
	F34	1	10,000	Frame tiedown ring RH side
	C37	1	10,000	Rear axle LH side
	E37	1	10,000	Rear axle RH side
	B37	1	10,000	Clevis on towing shackle LH side
	F37	1	10,000	Clevis on towing shackle RH side

Section IV. LOAD 2-4: TWO HELICOPTER, UTILITY UH-1D; TWO HELICOPTER, UTILITY UH-1H; TWO HELICOPTER, OBSERVATION OH-6A; ONE TRUCK, CARGO 1¼-TON XM561; ONE TRUCK, CARGO ¾-TON W / WN M37B1

2-25. Airplane Loading Configuration

Airplane forward kneeled and forward ramp in drive-in mode.

2-26. Preparing the Items

a. The UH-1 helicopters are loaded with minimum disassembly. Only one item, the FM whip antenna, requires removal for loading aboard the airplane, however, in loading maximum items the synchronized elevators, the horizontal stabilizers and the forward cargo doors were also removed.

b. The extent of disassembly for each helicopter depends on its tiedown location. Individual helicopter components are removed only as necessary for clearance.

c. The XM561 and M37B1 trucks are prepared in accordance with instructions in paragraph 1-6.

2-27. Materiel

a. Eight pieces 2- by 12-inch by 16-foot lumber to be positioned at the forward ramp toes to form ramp-toe extension.

b. A minimum of two sets of UH-1 ground handling wheels and one set of OH-6A ground handling wheels.

c. Three MB-1 tiedown device chains to form a towing bridle on each helicopter.

d. Sufficient ½-inch felt sheeting, salvaged mattresses, or other cushioning material to pad the forward cargo doors, the horizontal stabilizers, the synchronized elevators, and the FM whip antennas for tiedown in each UH-1.

e. Sixteen pieces of 2- by 12- by 100-inch lumber for construction of 8 tiedown beams.

f. Five pounds of 30-penny common nails for the tiedown beams.

2-28. Personnel and Duties

a. Construct eight tiedown beams (two per UH-1 helicopter) by nailing two pieces of the 100-inch lumber together lengthwise and along their edges.

b. Attach the ground handling wheels to the UH-1 helicopter skids.

c. Form a towing bridle with the three tiedown chains and attach it to the helicopter front cross tube.

d. Position the eight pieces of 2- by 12-inch by 16-foot lumber, four pieces for each treadway, at the ramp toes to form a ramp extension.

e. All UH-1 helicopters: Remove forward cargo doors, and stow, cushion, and tie down in the helicopters.

f. All UH-1 helicopters: Push the aft cargo doors to the rear and lock in place.

g. All UN-1 helicopters: Remove the outboard synchronized elevators and outboard stabilizer bars, Cushion, stow, and tie them down in the helicopters.

NOTE

Replacement nuts (8 each) for the stabilizer bar must be made available for reassembly of the stabilizer bar. These nuts are for one time use only.

h. Two OH-6A helicopters: Remove two opposing rotor blades from each helicopter. The blades are to be placed on mattresses and tied down beside the helicopters when loaded in the airplane.

i. Two OH-6A helicopters: Remove the cargo doors and stow, cushion, and tie down in the helicopters.

j. Eight men prepare each UH-1 helicopter in 20 minutes.

k. Three men prepare each OH-6A helicopter in 10 minutes.

2-29. Loading Instructions

a. *Material.* Twelve pieces of ½-inch by 1- by 8-foot plywood parking shoring, placed under the skids for tiedown of the helicopters.

b. *Personnel and Time.* Ten men load one UH-1 helicopter into the C-5 in 20 minutes. Five men load one OH-6A in 5 minutes. Two men load each truck in 3 minutes.

c. Procedure.

(1) Position the UH-1 helicopter, facing in the appropriate direction in front of the C-5 ramp, in line with the ramp-toe extension as shown in figure 2-18. Attach the airplane winch cable hook to the towing bridle (fig 2-19).

(2) Station the 10-man loading team: Four men at the empannage; two men at the cargo door

openings; one man on top of the helicopter cabin to observe overhead clearance to manipulate the rotor components to prevent contact with the airplane (fig 2-20); two men to hold each rotor blade tiedown strap to control the blades; and the leader who moves about as best to observe the loading and give instructions.

(3) Winch the helicopter up the ramp into the airplane.

(4) The men at the empannage move the tail up or down as necessary to prevent contact with the airplane that could result in damage. They keep the tail raised until the helicopter is past the ramp hinge, then loading is halted.

(5) Unhook the winch cable, remove the towing bridle, and manhandle the helicopter to its tiedown location onto the parking shoring.

(6) Remove the ground handling wheels.

(7) Load the remaining helicopters in numbered sequence.

(8) Position the OH-6A helicopter facing in the appropriate direction in front of the C-5 ramp, in line with the ramp-toe extension (fig 2-21). Attach the airplane winch cable hook to the towing bridle.

(9) Station the six man loading team: two men at the empannage; two men at the cargo door openings; one man to control the rotor blades; and the leader who moves about as best to observe the loading and give instructions.

(10) Winch the helicopter up the ramp into the airplane.

(11) Unhook the winch cable, remove the towing bridle, and manhandle the helicopter to its tiedown location onto the parking shoring.

(12) Remove the ground handling wheels.

(13) Load the second OH-6A helicopter in its numbered sequence.

(14) Position the trucks (fig 2-22) facing in the appropriate direction at the ramp toes in their numbered sequence and drive up the ramp to its tiedown location (fig 2-23).

2-30. Tiedown (See Caution in Paragraph 1-9 c)

a. Material.

(1) A minimum of 100 CGU-1B tiedown devices are required for tiedown of the six helicopters.

(2) Fourteen pieces of ½- by 12- by 30-inch felt sheeting, used under the tiedown straps where they are wrapped around the rotor blades.

(3) Twenty-four pieces of ½- by 12- by 18-inch sheeting, used under the tiedown straps at the end of the tiedown beams and under the straps passing through the OH-6A helicopter cargo compartments.

b. *Personnel and Time.* Eight men tie down on UH-1 helicopter in 15 minutes. Four men tie down

one OH-6A helicopter in 10 minutes. Eight men tie down the two trucks in 15 minutes.

c. Procedure.

(1) Position two tiedown beams across the floor of each helicopter cargo compartment as shown in figure 2-49.

(2) Tie down the helicopters and trucks in accordance with instructions in tiedown data table 2-4 and tiedown diagram (fig 2-23).

(3) Place one sheet of 12- by 30-inch felt under each tiedown strap where it is wrapped around a rotor blade, as shown in figure 2-52. Place one sheet of 12- by 18-inch felt under each tiedown strap where the strap passes over the end of a tiedown beam, as shown in figure 2-49.

2-31. Airplane Offloading Configuration

Airplane forward kneeled and forward ramp in drive-off mode.

2-32. Offloading Instructions

a. Materiel.

(1) A minimum of two sets of UH-1 ground handling wheels and one set of OH-6A ground handling wheels.

(2) Three MB-1 tiedown device chains for the towing bridle.

b. Personnel and time. Eight men install the ground handling wheels and towing bridle, and offload one helicopter from the C-5 in 10 minutes.

c. Procedure. Offloading is the reverse of loading, except the winch is used for braking the helicopter as it is manhandled down the C-5 ramp. A lumber ramp-toe extension is required. Remove parking shoring from the airplane as each helicopter is offloaded.

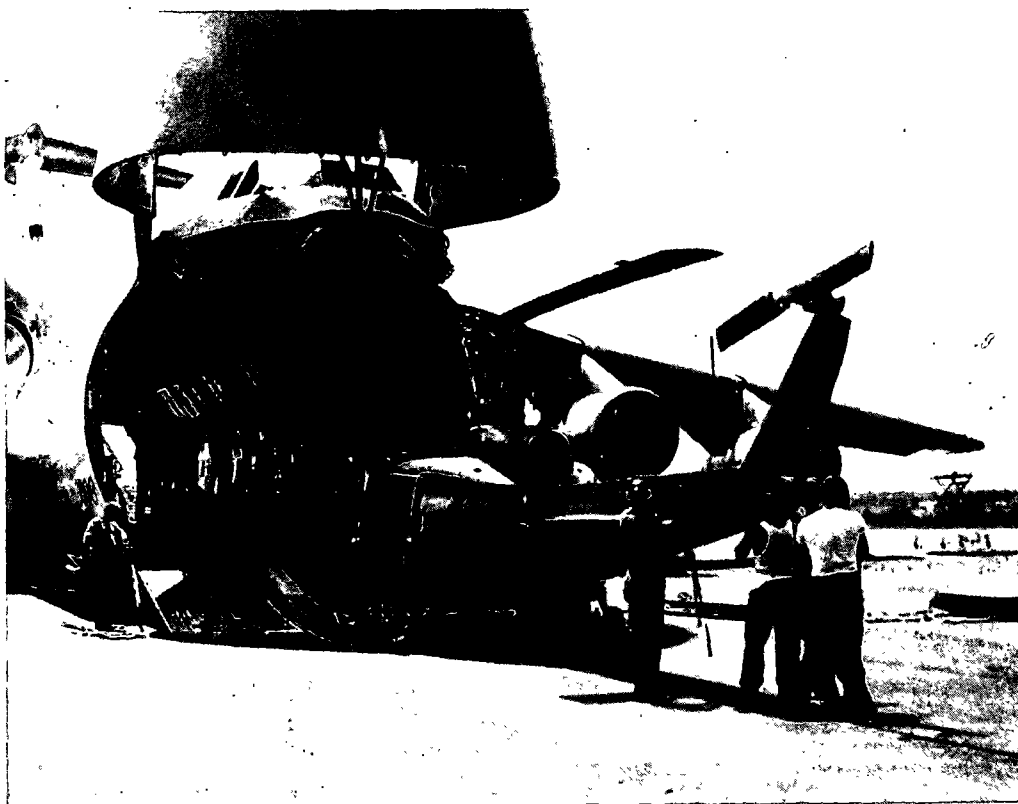


Figure 2-18. UH-1 helicopter positioned for loading.

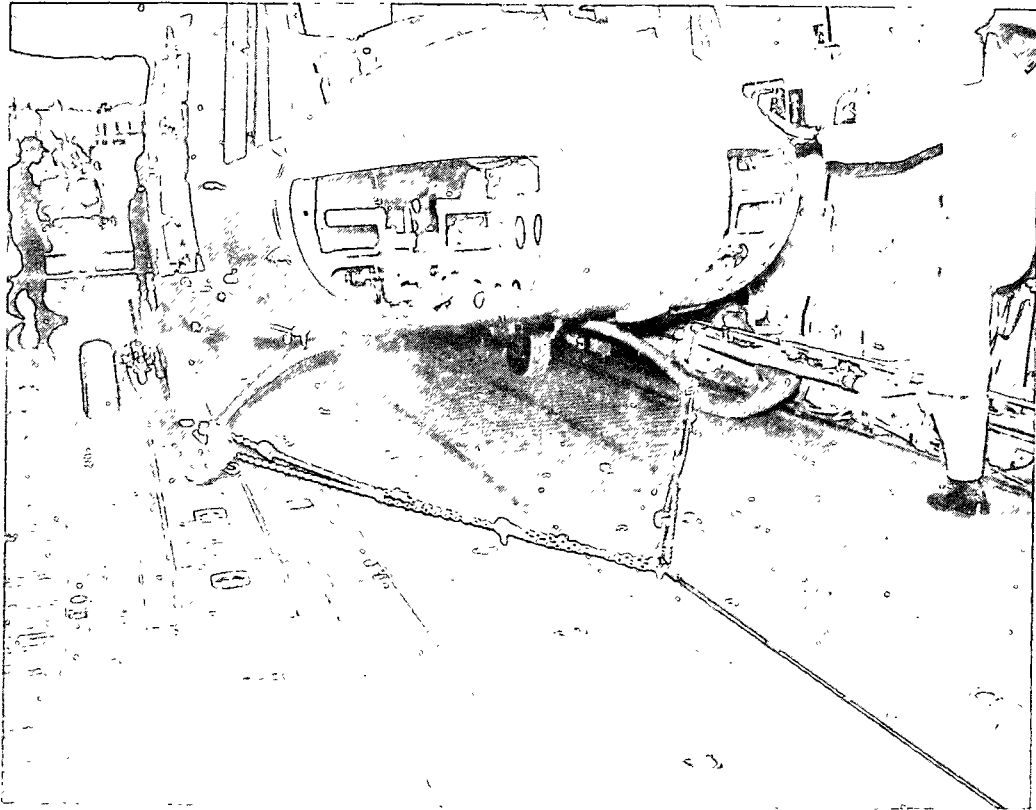


Figure 2-19. Airplane winch cable hooked to towing bridle.

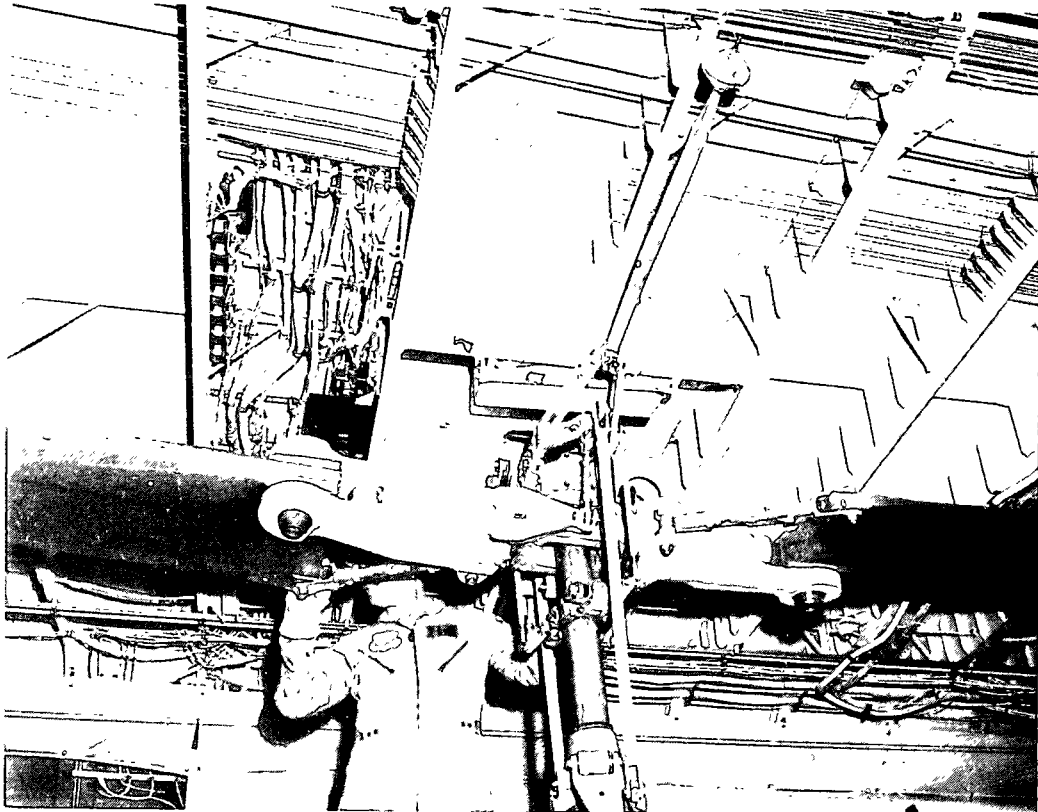


Figure 2-20. Man on top of helicopter to observe clearance.

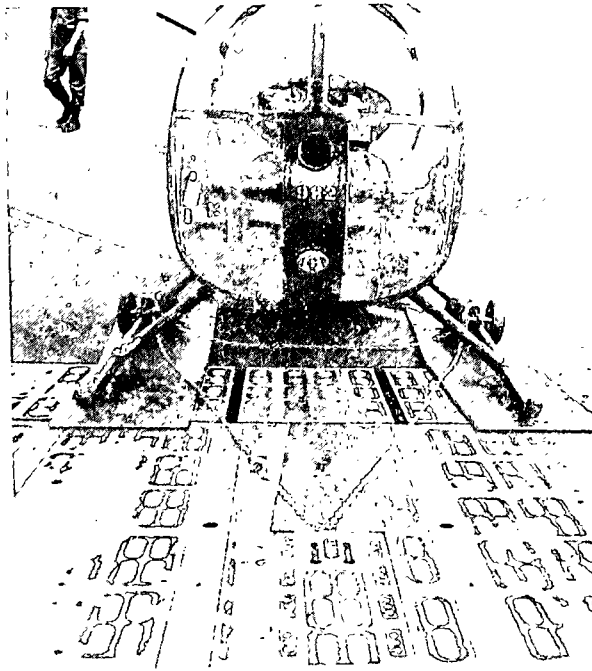


Figure 2-21. OH-6A helicopter positioned for loading.

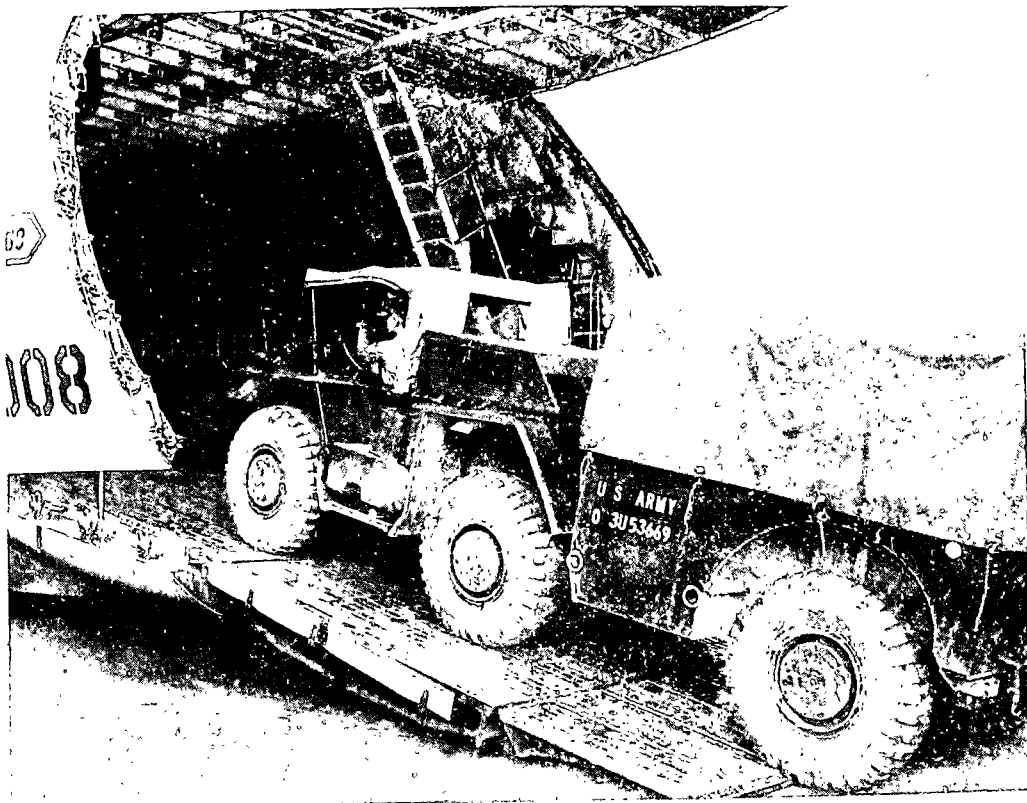
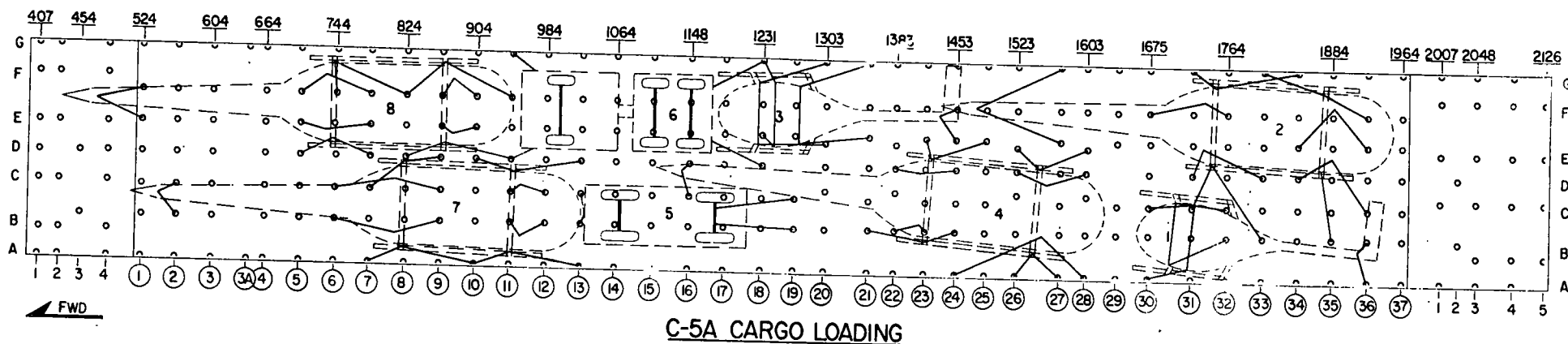


Figure 2-22. XM561 truck loaded over forward ramp.



LOAD 2-4

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP	SIA	WEIGHT	CUBE	REMARKS
1 HELICOPTER, OBSERVATION, OH-6A	FWD	TAIL	1,930	1,510	6,605	SHORING REQUIRED
2 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1,440	6,500	9,066	SHORING REQUIRED
3 HELICOPTER, OBSERVATION, OH-6A	FWD	TAIL	1,450	1,510	6,605	SHORING REQUIRED
4 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1,100	6,500	9,066	SHORING REQUIRED
5 TRUCK, CARGO, 3/4-TON, 4x4, W/W M3781	AFT	FRONT	1,220	5,820	846	
6 TRUCK, CARGO, 1 1/4-TON, XM561	AFT	FRONT	1,180	7,640	1,178	
7 HELICOPTER, UTILITY, UH-1D	AFT	TAIL	520	6,250	9,066	SHORING REQUIRED
8 HELICOPTER, UTILITY, UH-1D	AFT	TAIL	440	6,250	9,066	SHORING REQUIRED
TOTALS				41,980	51,498	

25

Figure 2-23. Tiedown diagram for load 2-4.

Table 2-4. Tiedown Data for Load 2-4

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	A29 / B29	1	5,000	Around front rotor blade
	A30 / C30	1	5,000	Through cargo compartment
	B32 / C32	1	5,000	Through crew compartment
	A35 / B35	1	5,000	Around rear rotor blade
	A36 / B36	1	5,000	Around tail boom
2	F36 / G33	2	5,000	Around front cross tube LH side
	B35	1	5,000	Around front cross tube RH side
	G31 / G34	2	5,000	Around rear cross tube LH side
	B33 / G31	2	5,000	Around rear cross tube RH side
	E36	1	5,000	Front mooring ring LH side
	E34	1	5,000	Front mooring ring LH side
	C36	1	5,000	Front mooring ring RH side
	D34	1	5,000	Front mooring ring RH side
	F32	1	5,000	Rear mooring ring LH side
	F30	1	5,000	Rear mooring ring LH side
	D33	1	5,000	Rear mooring ring RH side
	D31	1	5,000	Rear mooring ring RH side
	E27 / G27	1	5,000	Around tail skid
	D37 / G37	2	5,000	Around front rotor blade
	E26 / G26	2	5,000	Around rear rotor blade
3	E18 / G18	1	5,000	Around front rotor blade
	E18 / G18	1	5,000	Through cargo compartment
	E20 / G20	1	5,000	Through crew compartment
	E21 / G21	1	5,000	Through cargo compartment
	E22 / G22	1	5,000	Around rear rotor blade
	E25 / F25	1	5,000	Around tail boom
4	E26 / E28	2	5,000	Around front cross tube LH side
	A26 / A27	2	5,000	Around front cross tube RH side
	E23 / E25	2	5,000	Around rear cross tube LH side
	B21 / B24	2	5,000	Around rear cross tube RH side
	D26	1	5,000	Front mooring ring LH side
	D27	1	5,000	Front mooring ring LH side
	A24	1	5,000	Front mooring ring RH side
	A28	1	5,000	Front mooring ring RH side
	D22	1	5,000	Rear mooring ring LH side
	D24	1	5,000	Rear mooring ring LH side
	B22	1	5,000	Rear mooring ring RH side
	B23	1	5,000	Rear mooring ring RH side
	C16 / D16	1	5,000	Around tail skid
	C29	2	5,000	Around front rotor blade
	D22	2	5,000	Around rear rotor blade
5	B13	1	25,000	Pintle
	C13	1	25,000	Pintle
	B29	1	25,000	Front axle RH side
	C29	1	25,000	Front axle LH side
6	D18	1	25,000	Front tiedown ring RH side
	G18	1	25,000	Front tiedown ring LH side
	D11	1	10,000	Rear tiedown ring RH side
	G11	1	10,000	Rear tiedown ring LH side
7	D10 / D13	2	5,000	Around front cross tube LH side
	A10 / A13	2	5,000	Around front cross tube RH side
	C7 / D9	2	5,000	Around rear cross tube LH side
	A7 / A110	2	5,000	Around rear cross tube RH side
	C11	1	5,000	Front mooring ring LH side
	C12	1	5,000	Front mooring ring LH side
	B11	1	5,000	Front mooring ring RH side
	B12	1	5,000	Front mooring ring RH side
	C6	1	5,000	Rear mooring ring LH side

Table 2-4—Continued

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at.
7	C9	1	5,000	Rear mooring ring LH side
	B6	1	5,000	Rear mooring ring RH side
	B9	1	5,000	Rear mooring ring RH side
	B2 / C2	1	5,000	Around tail skid
	A14	2	5,000	Around front rotor blade
	C4	2	5,000	Around rear rotor blade
8	F8 / F11	2	5,000	Around front cross tube LH side
	E8 / E11	2	5,000	Around front cross tube RH side
	F6 / F8	2	5,000	Around rear cross tube LH side
	E6 / E8	2	5,000	Around rear cross tube RH side
	F9	1	5,000	Front mooring ring LH side
	F10	1	5,000	Front mooring ring LH side
	E9	1	5,000	Front mooring ring RH side
	E10	1	5,000	Front mooring ring RH side
	F5	1	5,000	Rear mooring ring LH side
	F7	1	5,000	Rear mooring ring LH side
	E5	1	5,000	Rear mooring ring RH side
	E7	1	5,000	Rear mooring ring RH side
	D1 / F1	1	5,000	Around tail skid
	E11	2	5,000	Around front rotor blade
	E3	2	5,000	Around rear rotor blade

Section V. LOAD 2-5: TWO ARMORED RECONNAISSANCE AIRBORNE ASSAULT VEHICLE M551; ONE GUN, FA, SP, 175MM, M107; THREE CARRIER, COMMAND, RECONNAISSANCE M114A1; ONE CARRIER, COMMAND POST M577A1 (FIG 2-24)

NOTE

This load configuration reflects design aircraft load and may require altering for reduced ACL.

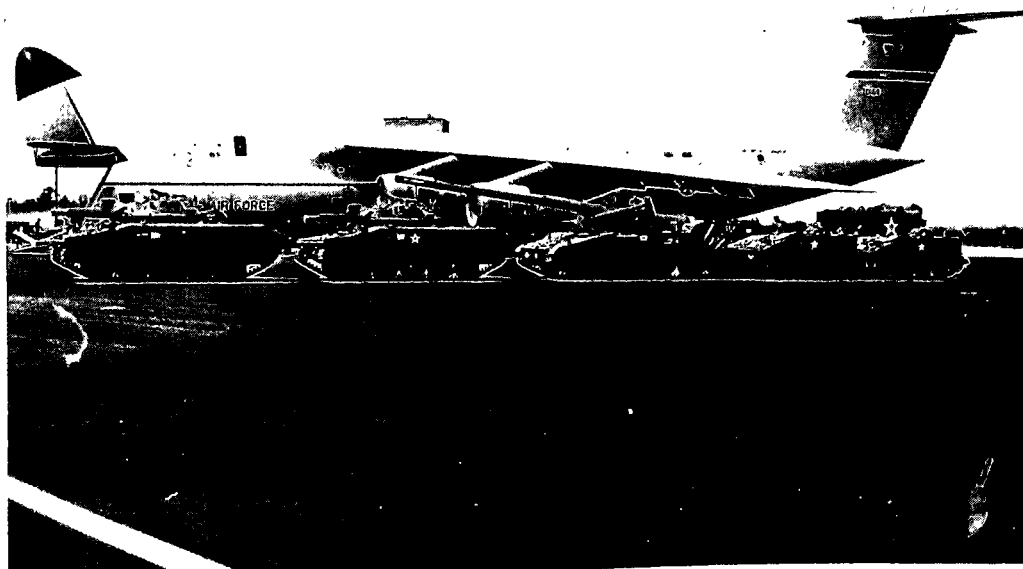


Figure 2-24. Vehicle lineup for load 2-5.

2-33. Airplane Loading Configuration

Airplane level kneeled and both ramps in drive-in mode.

2-34. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6. M107 barrel is placed in the depressed position.

2-35. Materiel

Sufficient, minimum 1/2-inch thick, rolling and parking shoring to lay a 24-inch wide path 120 feet long in the airplane for each driveway. A lesser amount of shoring is required for this operation if the shoring is "leap-frogged" as the tracked vehicles are moved into the airplane.

2-36. Personnel and Duties

Six men load each tracked vehicle into the airplane in 2 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring.

2-37. Loading Instructions

Drive each vehicle into the cargo compartment over the aft ramp and park with the front of each vehicle at station numbers prescribed in tiedown diagram (fig 2-28). The M107 must be in the depressed position (fig 2-25).

2-38. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

b. *Procedure.* Tie down all items in accordance with the instructions in tiedown data table 2-5 and figures 2-26 through 2-28.

2-39. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane level kneeled.

2-40. Offloading Instructions

a. Position shoring on each driveway from station 564 to forward ramp toes.

b. Plane the M107 barrel in the travel position.

c. Offload each vehicle over the forward ramp as shown in figures 2-29 and 2-30.

d. Eight men offload the load in 3 minutes.

e. Remove all shoring from the airplane.

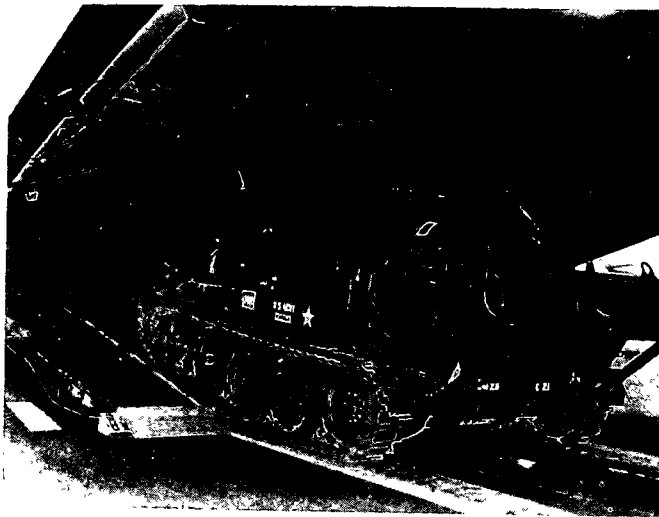


Figure 2-25. Loading the M107 over aft ramp. Note the depressed position of the gun barrel.

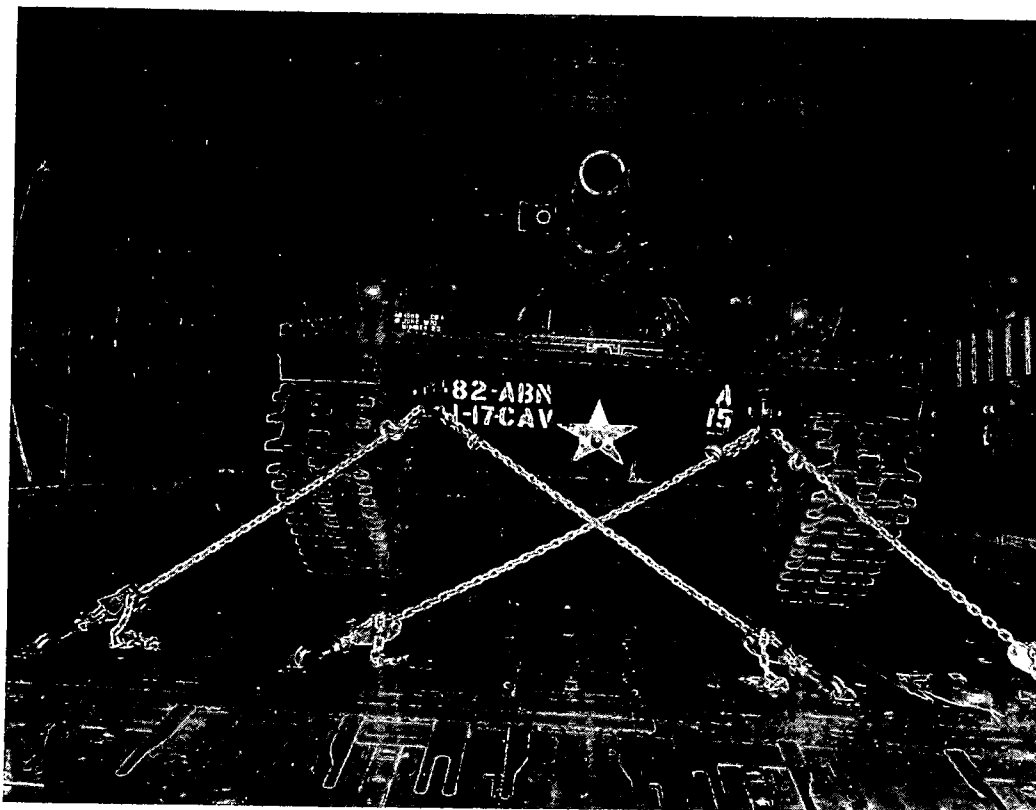


Figure 2-26. Tiedown of M551 ARAAV.

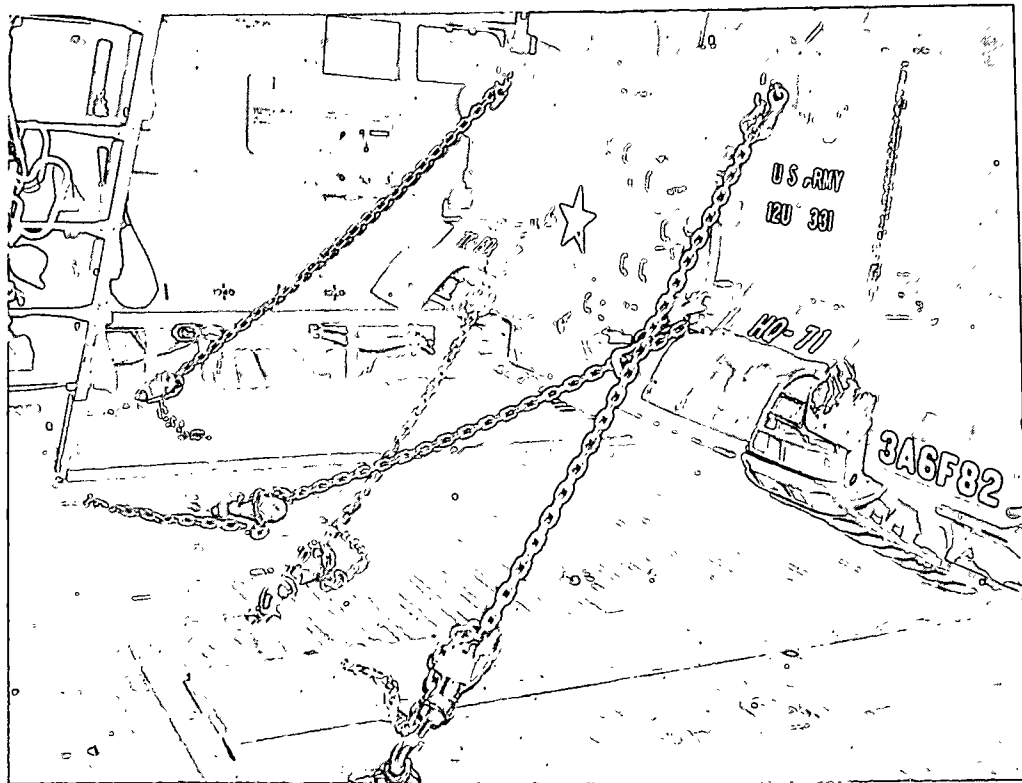
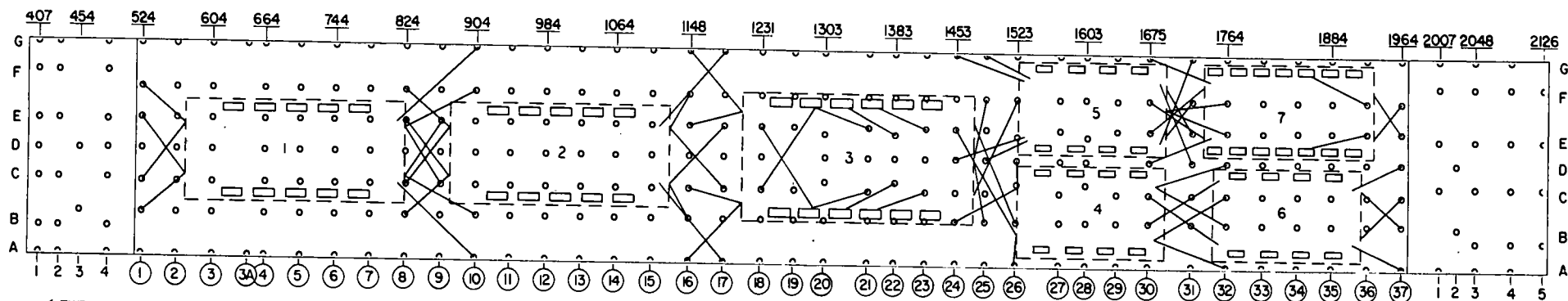


Figure 2-27. Tiedown of M114A1 carrier.



C-5A CARGO LOADING

LOAD 2-5

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP	LOCATION OF RP		WEIGHT	CUBE	REMARKS
			RP	STA			
1 ARMORED RECON ABN ASLT VEH, M551	FWD	FRONT		575	28,400	1,783	SHORING REQUIRED
2 ARMORED RECON ABN ASLT VEH, M551	FWD	FRONT		878	28,400	1,783	SHORING REQUIRED
3 GUN, FA, SP, 175MM, M107	FWD	FRONT		1,210	61,200	3,683	SHORING REQUIRED TUBE DEPRESSED
4 CARRIER, CMD/RECON, ARMORED, M114A1	FWD	FRONT		1,525	15,276	762	SHORING REQUIRED
5 CARRIER, CMD/RECON, ARMORED, M114A1	FWD	FRONT		1,509	15,276	762	SHORING REQUIRED
6 CARRIER, CMD/RECON, ARMORED, M114A1	FWD	FRONT		1,750	15,276	762	SHORING REQUIRED
7 CARRIER, CP, LIGHT, TRACKED, M577	FWD	FRONT		1,730	21,590	1,208	SHORING REQUIRED
TOTALS					185,418	10,743	

92

Figure 2-28. Tiedown diagram for load 2-5.

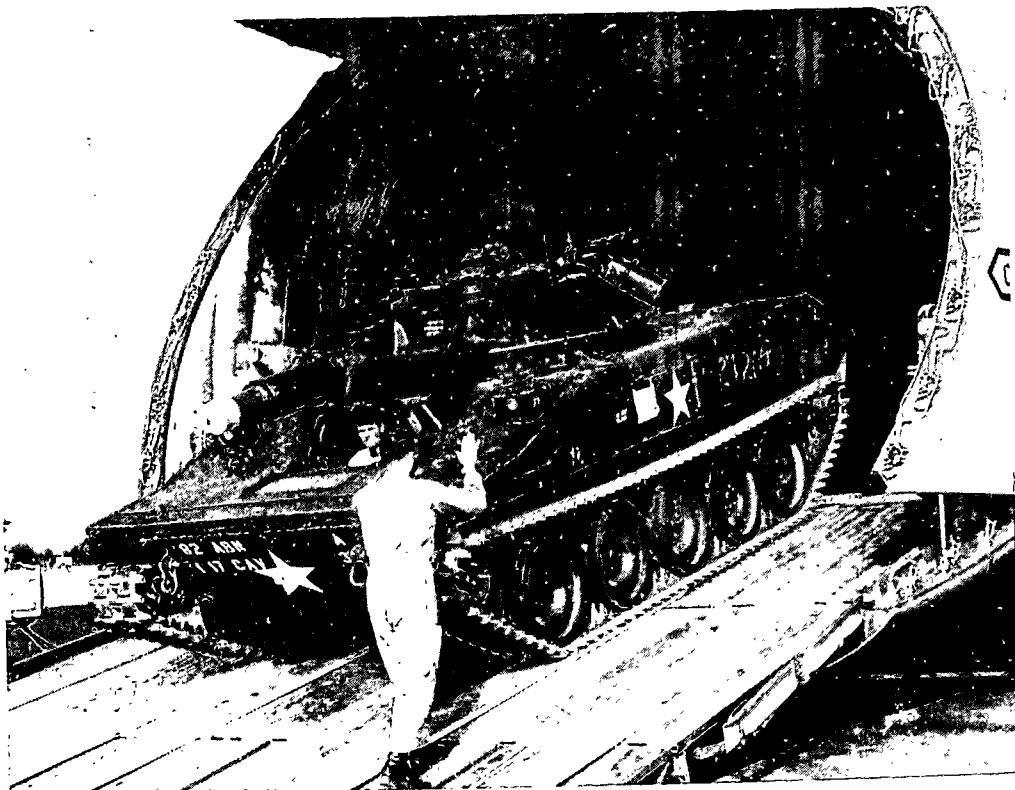


Figure 2-29. Offloading the M551 ARAAV over forward ramp.

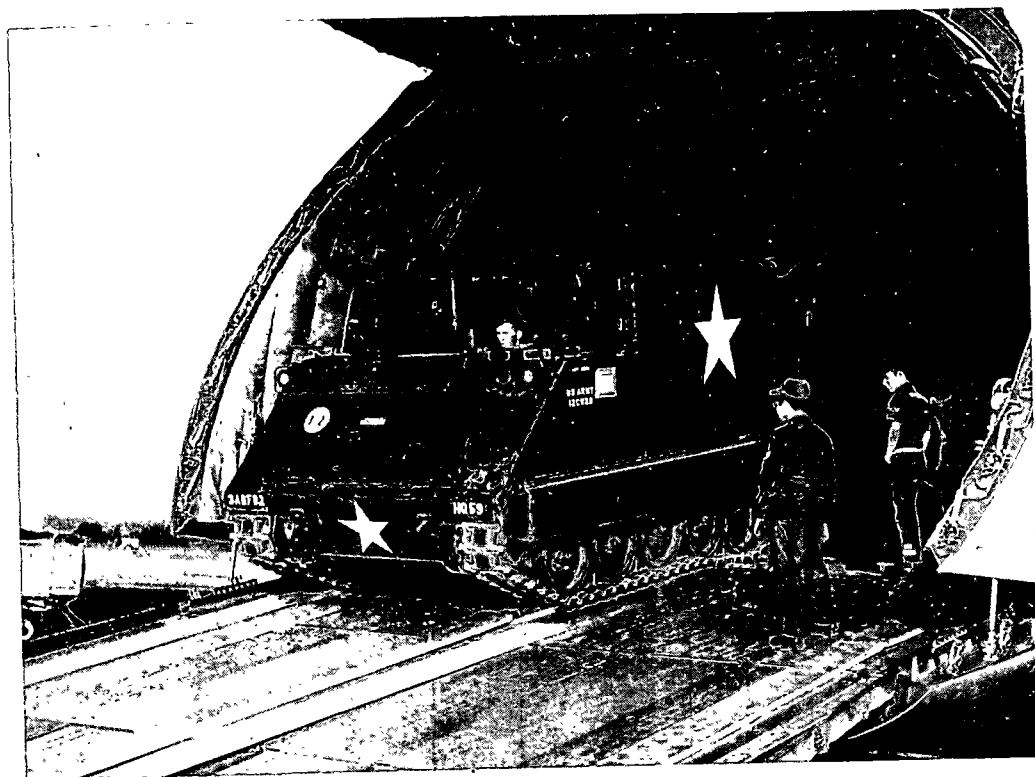


Figure 2-30. Offloading the M577 carrier over forward ramp.

Table 2-5. Tiedown Data for Load 2-5.

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	C1	1	25,000	Clevis on towing eye RH side
	E1	1	25,000	Clevis on towing eye LH side
	B1	1	25,000	Clevis on towing eye LH side
	F1	1	25,000	Clevis on towing eye RH side
	C9	1	25,000	Clevis on towing eye RH side
	E9	1	25,000	Clevis on towing eye LH side
	B10	1	25,000	Clevis on towing eye LH side
	F10	1	25,000	Clevis on towing eye RH side
	A10	2	25,000	Lifting eye LH side
	G10	2	25,000	Lifting eye RH side
2	C8	1	25,000	Clevis on towing eye RH side
	E8	1	25,000	Clevis on towing eye LH side
	B8	1	25,000	Clevis on towing eye LH side
	F8	1	25,000	Clevis on towing eye RH side
	A17	2	25,000	Lifting eye LH side
	G17	2	25,000	Lifting eye RH side
	B17	1	25,000	Clevis on towing eye LH side
	F17	1	25,000	Clevis on towing eye RH side
	C17	1	25,000	Clevis on towing eye RH side
	E17	1	25,000	Clevis on towing eye LH side
3	C18	1	25,000	Second wheel axle RH side
	E18	1	25,000	Second wheel axle LH side
	A16	2	25,000	Towing shackle LH side
	G16	2	25,000	Towing shackle RH side
	C16	1	25,000	Towing shackle LH side
	E16	1	25,000	Towing shackle RH side
	C21	1	25,000	Second wheel axle LH side
	E21	1	25,000	Second wheel axle RH side
	C22	1	25,000	Third wheel axle LH side
	E22	1	25,000	Third wheel axle RH side
	C23	1	25,000	Fourth wheel axle LH side
	E23	1	25,000	Fourth wheel axle RH side
	B25	1	25,000	Towing hitch LH side
	F25	1	25,000	Towing hitch RH side
	B26	1	25,000	Towing shackle RH side
	F26	1	25,000	Towing shackle LH side
4	B24	1	25,000	Towing shackle RH side
	F24	1	25,000	Towing shackle LH side
	A26	1	25,000	Towing shackle LH side
	D26	1	25,000	Towing shackle RH side
	A32	1	25,000	Lifting eye on LH side of vehicle
	D32	1	25,000	Lifting eye on RH side of vehicle
	B32	1	25,000	Lifting eye RH side
	C32	1	25,000	Lifting eye LH side
5	D24	1	25,000	Lifting shackle LH side
	G24	1	25,000	Lifting shackle RH side
	D25	1	25,000	Lifting eye LH side
	G25	1	25,000	Lifting eye RH side
	D31	1	25,000	Lifting eye RH side
	G31	1	25,000	Lifting eye LH side
	E31	1	25,000	Towing shackle RH side
	F31	1	25,000	Towing shackle LH side
	E32	1	25,000	Towing hitch LH side
	F32	1	25,000	Towing hitch RH side
6	B30	1	25,000	Lifting eye RH side
	C30	1	25,000	Lifting eye LH side
	A37	1	25,000	Lifting eye LH side
	D37	1	25,000	Lifting eye RH side
	B37	1	25,000	Towing shackle RH side
	C37	1	25,000	Towing shackle LH side

Table 2-5—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
7	D30	1	25,000	Lifting eye LH side
	G30	1	25,000	Lifting eye RH side
	E30	1	25,000	Towing shackle RH side
	F30	1	25,000	Towing shackle LH side
	E36	1	25,000	Fourth wheel axle LH side
	F36	1	25,000	Fourth wheel axle RH side
	E37	1	25,000	Towing shackle RH side
	F37	1	25,000	Towing shackle LH side

Section VI. LOAD 2-6: ONE TRUCK, CARGO, 5-TON XM656 W/ MOUNTED POWER STATION; ONE TRUCK, CARGO, 5-TON XLWB M55 W/ WN; ONE TRUCK, TRACTOR, 5-TON W/ WN XM757; ONE ERECTOR-LAUNCHER, TRAILER MOUNTED XM790; ONE TRUCK, CARGO, 5-TON XM656 W/ MOUNTED AN/- TRC-80; ONE TRUCK, WRECKER, 5-TON M543A2C (FIG 2-31)

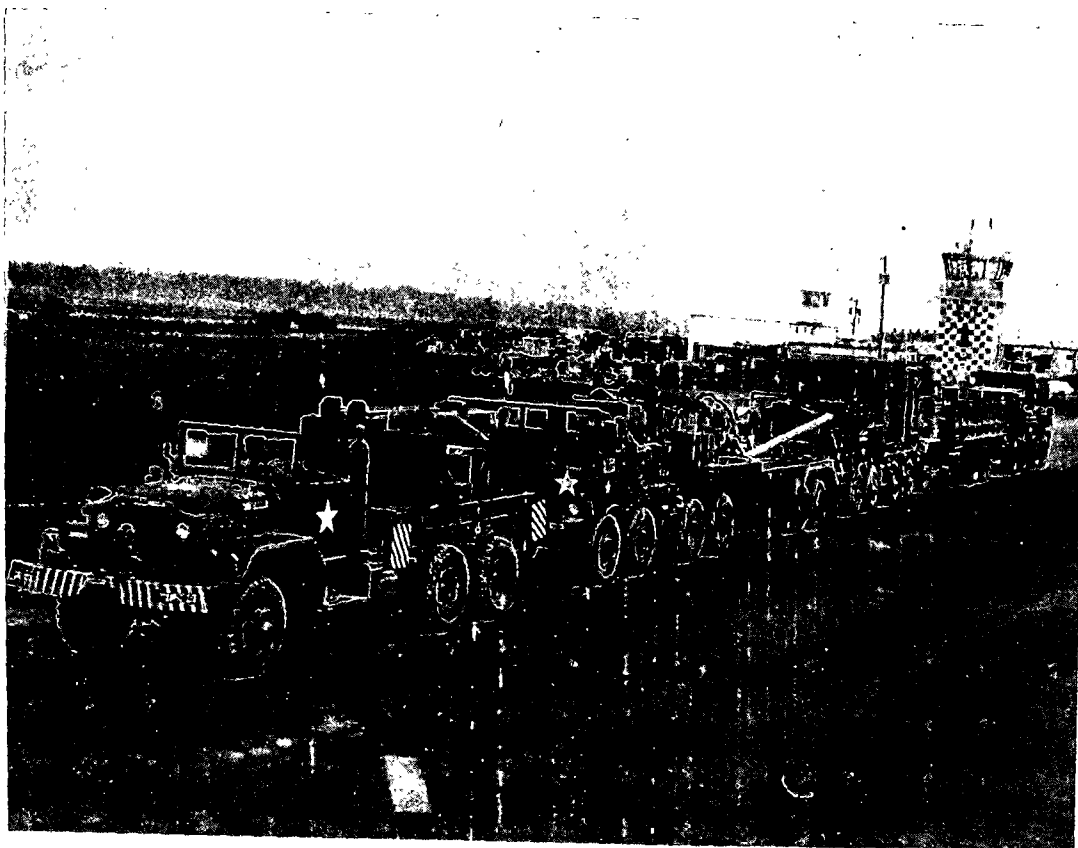


Figure 2-31. Vehicle lineup for load 2-6.

2-41. Airplane Loading Configuration

Airplane level kneeled and aft ramp in drive-in mode.

2-42. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-43. Materiel

None.

2-44. Personnel and Duties

Ten men load all vehicles into the airplane in 15 minutes. One man drives the vehicle and one man signals directions during loading.

2-45. Loading Instructions

Drive each vehicle into the cargo compartment over the aft ramp as shown in figures 2-32 through 2-34 and park each vehicle at station prescribed in tiedown diagram (fig 2-35).

2-46. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Ten men tie down the load in 25 minutes.

b. Tiedown the items in accordance with the instructions in tiedown data table 2-6 and figures 2-35 through 2-37.

2-47. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane level kneeled.

2-48. Offloading Instructions

- a. Offload all vehicles over the forward ramp.
- b. Ten men offload all vehicles in 4 minutes.

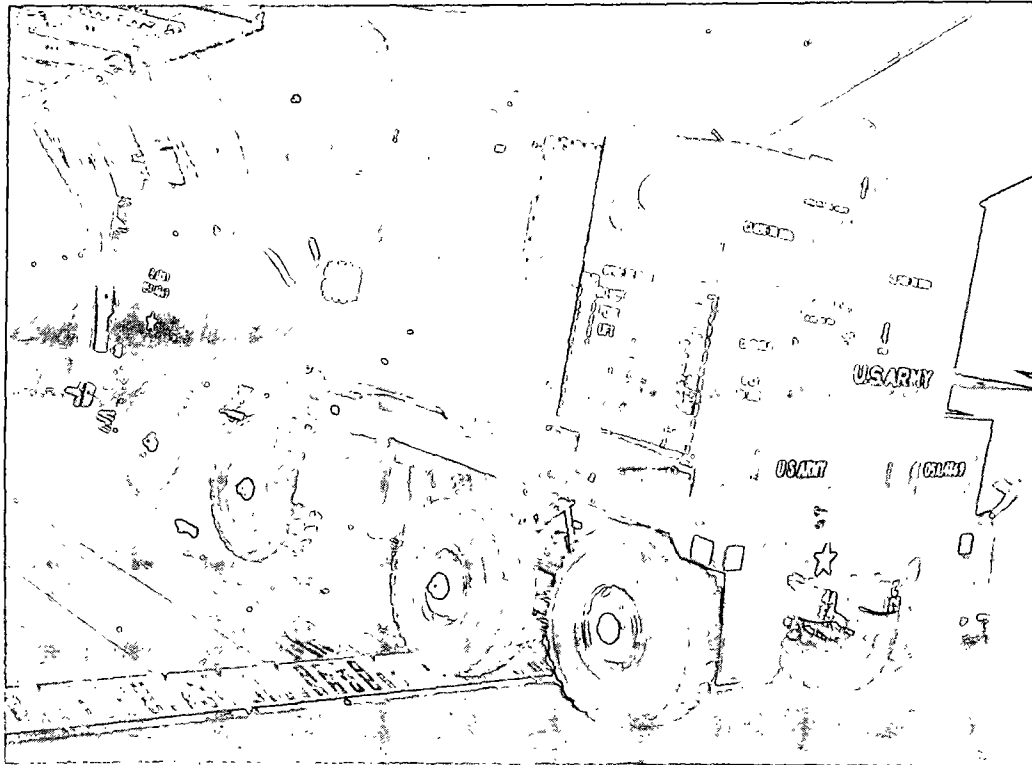


Figure 2-32. Loading the XM656 truck over the aft ramp.



Figure 2-33. Loading the XM757 truck and XM790 erector-launcher over the aft ramp.

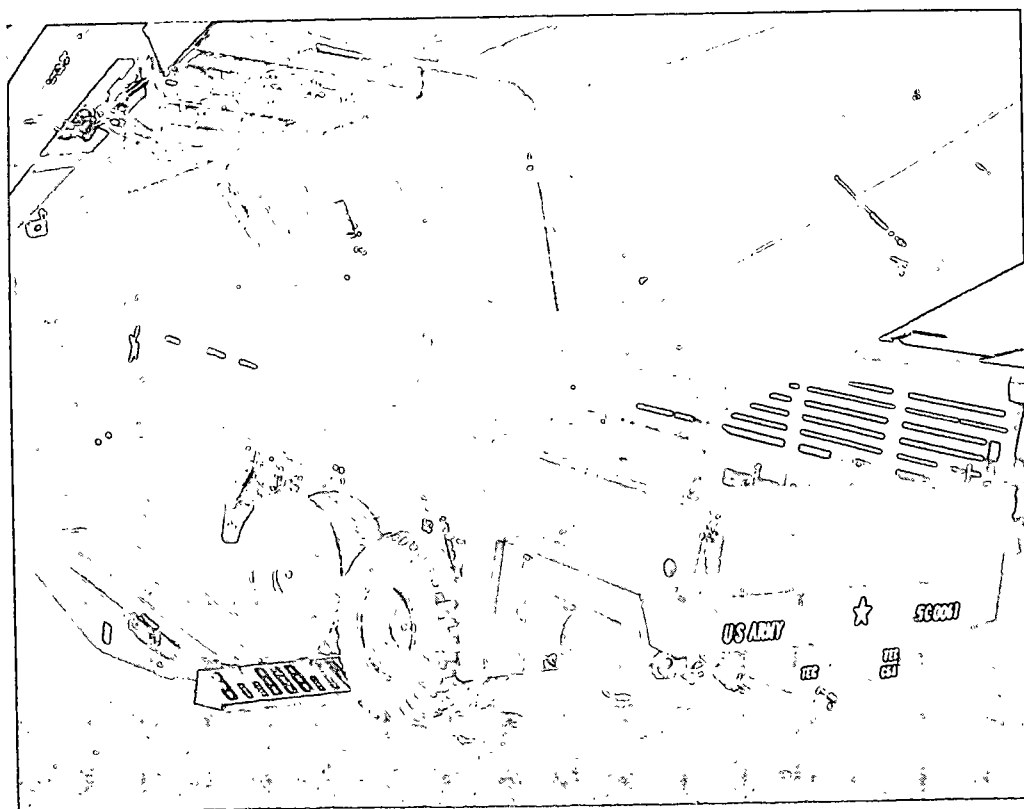
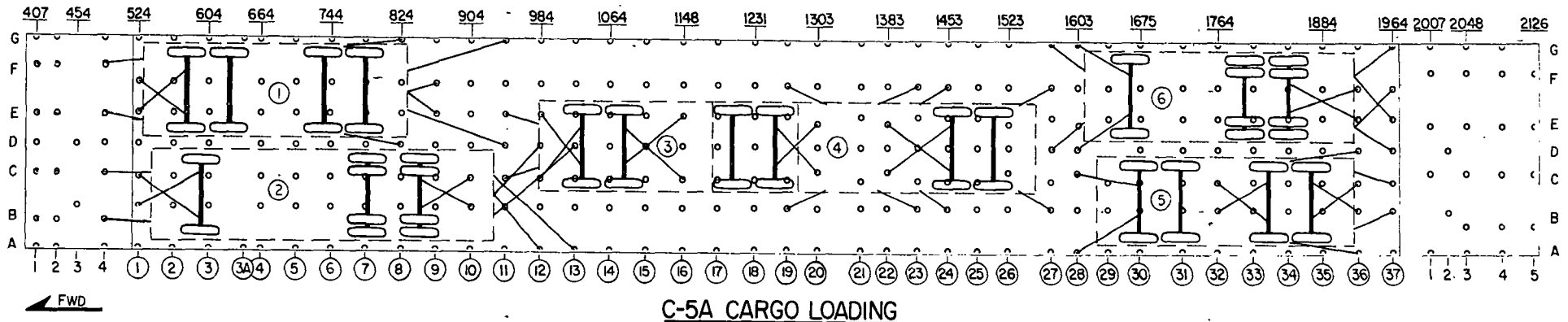


Figure 2-34. Loading the M55 truck over the aft ramp.



LOAD 2-6

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	STA			
1 TRUCK, CARGO, 5-TON XM556 W/MTD POWER STATION	FWD	FRONT	530	25,090	2.671	
2 TRUCK, CARGO, XLWB, M55 W/MN	FWD	FRONT	540	25,150	2.515	
3 TRUCK, TRACTOR, 5-TON W/MN XM757	FWD	FRONT	980	17,980	1.962	
4 ERECTOR-LAUNCHER, TRAILER MTD XM790	FWD	REAR	1550	18,980	2.911	
5 TRUCK, CARGO, 5-TON XM556 W/MTD AMTRC-80	FWD	FRONT	1625	22,670	2.300	
6 TRUCK, WRECKER, 5-TON, MS43A2C	FWD	FRONT	1610	34,280	2.256	
TOTALS				144,150	14.615	

72
Figure 2-35. Tiedown diagram for load 2-6.

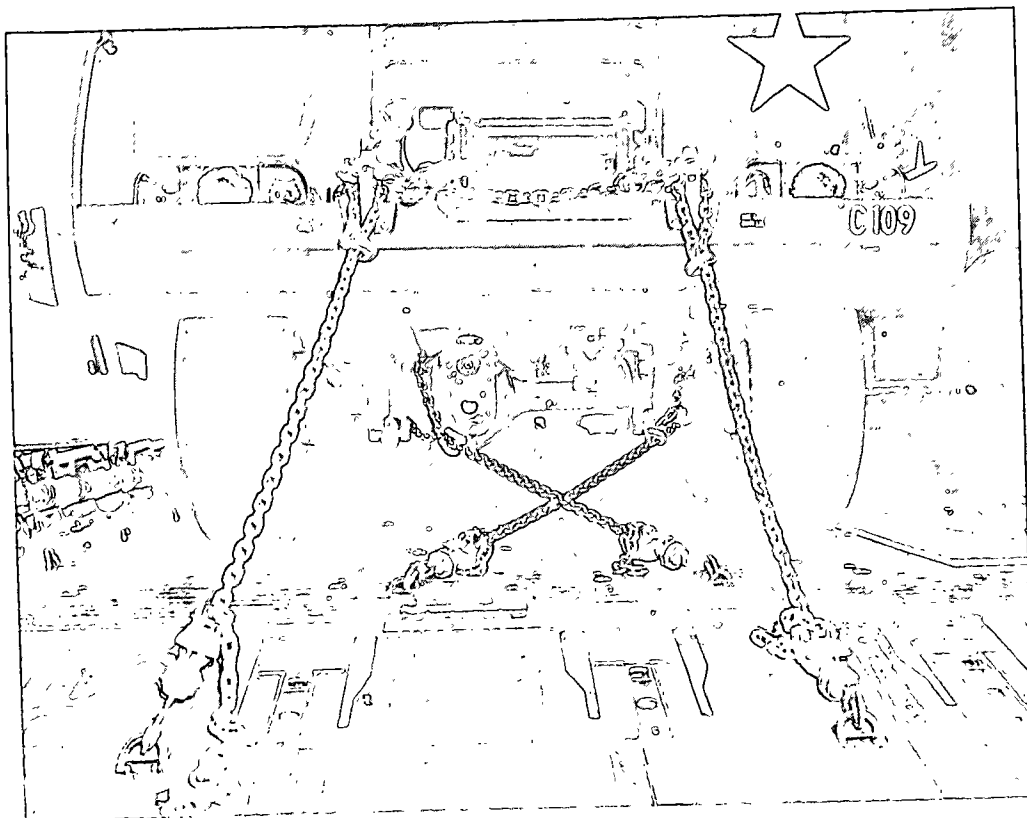


Figure 2-36. Tiedown for front of the XM656 truck.

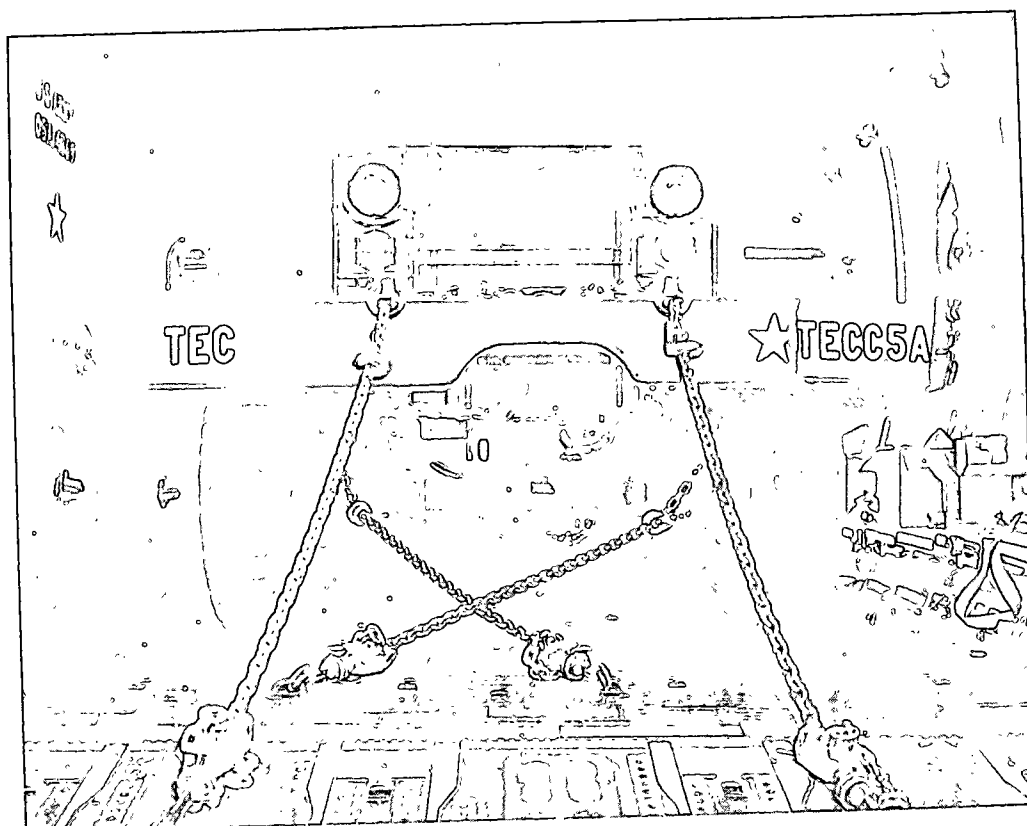


Figure 2-37. Tiedown for front of the M-55 truck.

Table 2-6. Tiedown Data for Load 2-6

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E4	2	25,000	Tiedown point at front bumper LH side
	(fwd ramp)			
	F4	2	25,000	Tiedown point at front bumper RH side
	(fwd ramp)			
	E1	1	25,000	Front axle RH side
	F1	1	25,000	Front axle LH side
	D8	1	25,000	Tiedown point between rear axles LH side
	G8	1	25,000	Tiedown point between rear axles RH side
	E9	1	25,000	Pintle
	F9	1	25,000	Pintle
2	D11	2	25,000	Towing shackle LH side
	G11	2	25,000	Towing shackle RH side
	B4	2	25,000	Clevis at bumper LH side
	(fwd ramp)			
	C4	2	25,000	Clevis at bumper RH side
	(fwd ramp)			
	B1	1	25,000	Front axle RH side
	C1	1	25,000	Front axle LH side
	B10	1	25,000	Rear axle RH side
	C10	1	25,000	Rear axle LH side
3	A12	1	25,000	Pintle
	D12	1	25,000	Pintle
	A13	2	25,000	Towing shackle RH side
	D13	2	25,000	Towing shackle LH side
	C11	1	25,000	Tiedown point at front bumper LH side
	E11	1	25,000	Tiedown point at front bumper RH side
	C12	1	25,000	Front axle RH side
	E12	1	25,000	Front axle LH side
	C16	1	25,000	Rear front axle RH side
	E16	1	25,000	Rear front axle LH side
4	C20	1	25,000	Rear axle RH side
	E20	1	25,000	Rear axle LH side
	B19	1	25,000	1st tiedown provision LH side
	F19	1	25,000	1st tiedown provision RH side
	C22	1	25,000	Front axle RH side
	E22	1	25,000	Front axle LH side
	B23	1	25,000	2nd tiedown provision LH side
	F23	1	25,000	2nd tiedown provision RH side
	B24	1	25,000	3rd tiedown provision LH side
	F24	1	25,000	3rd tiedown provision RH side
5	B27	1	25,000	6th tiedown provision LH side
	F27	1	25,000	6th tiedown provision RH side
	A28	1	25,000	Front axle LH side
	C28	1	25,000	Front axle RH side
	B32	1	25,000	Front rear axle RH side
	C32	1	25,000	Front rear axle LH side
	A36	1	25,000	Tiedown point between rear axles LH side
	D36	1	25,000	Tiedown point between rear axles RH side
	B36	1	25,000	Rear axle RH side
	C36	1	25,000	Rear axle LH side
6	B37	1	25,000	Towing shackle LH side
	C37	1	25,000	Towing shackle RH side
	D27	1	25,000	Clevis at bumper LH side
	G27	1	25,000	Clevis at bumper RH side
	D28	1	25,000	Front axle LH side
	G28	1	25,000	Front axle RH side
	E36	1	25,000	Rear axle RH side
	F36	1	25,000	Rear axle LH side
	E37	1	25,000	Towing shackle RH side
	F37	1	25,000	Towing shackle LH side
	D37	1	25,000	Towing shackle LH side
	G37	1	25,000	Towing shackle RH side

Section VII. LOAD 2-7: TWO TRUCK, CARGO 3/4-TON W/ WN M37B1; TWO LOADER, TRANSPORTER, GM XM688E1; ONE LAUNCHER, GUIDED MISSILE, XM687; ONE CARRIER, COMMAND POST M577A1 (FIG 2-38)

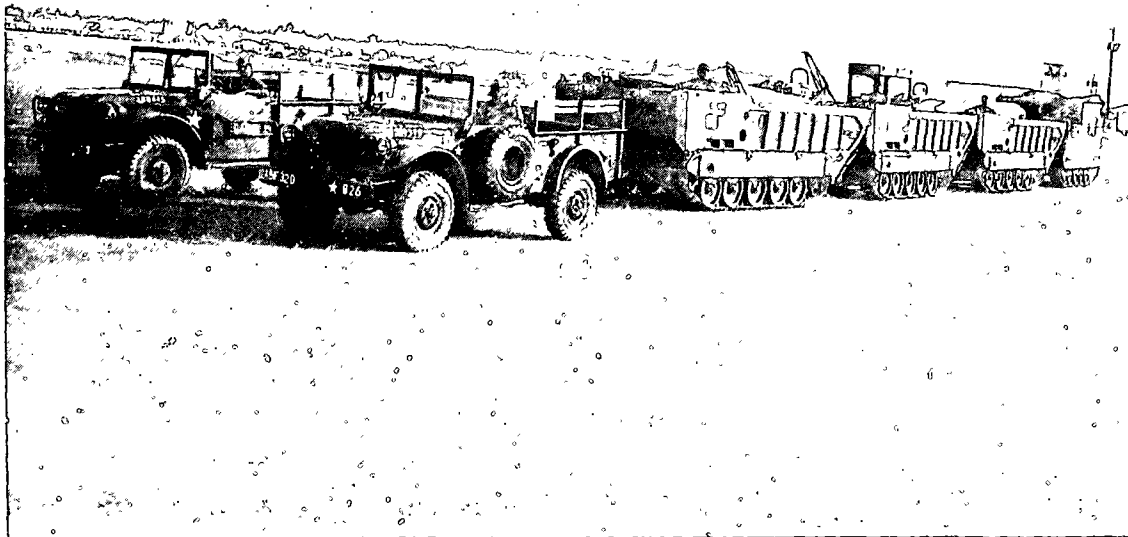


Figure 2-38. Vehicle lineup for load 2-7.

2-49. Airplane Loading Configuration

Airplane level kneeled and both ramps in drive-in mode.

2-50. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-51. Materiel

Sufficient, minimum 1/2-inch thick, rolling and parking shoring to lay a 24-inch wide path 100 feet long in the airplane for each driveway. A lesser amount of shoring is required for this operation if the shoring is "leap-frogged" as the vehicles are moved into the airplane.

2-52. Personnel and Duties

Six men load each tracked vehicle into the airplane in 2 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring. Two men load each M37 truck in 1 minute. One man drives the truck and one man signals directions during loading.

2-53. Loading Instructions

a. Position shoring on each driveway from the aft ramp toes into the cargo compartment.

b. Drive each vehicle into the cargo compartment over the aft ramp as shown in figures 2-39 and 2-40 and park with the front of each vehicle at station number prescribed in tiedown diagram (fig 2-41).

2-54. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the entire load in 30 minutes.

b. *Procedure.* Tie down all items in accordance with the instructions in tiedown diagram (fig 2-41) and tiedown data table 2-7.

2-55. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane level kneeled.

2-56. Offloading Instructions

a. Offload items 1 and 2.

b. Position shoring on each driveway from station 760 to forward ramp toes.

c. Eight men offload the entire load in 7 minutes.

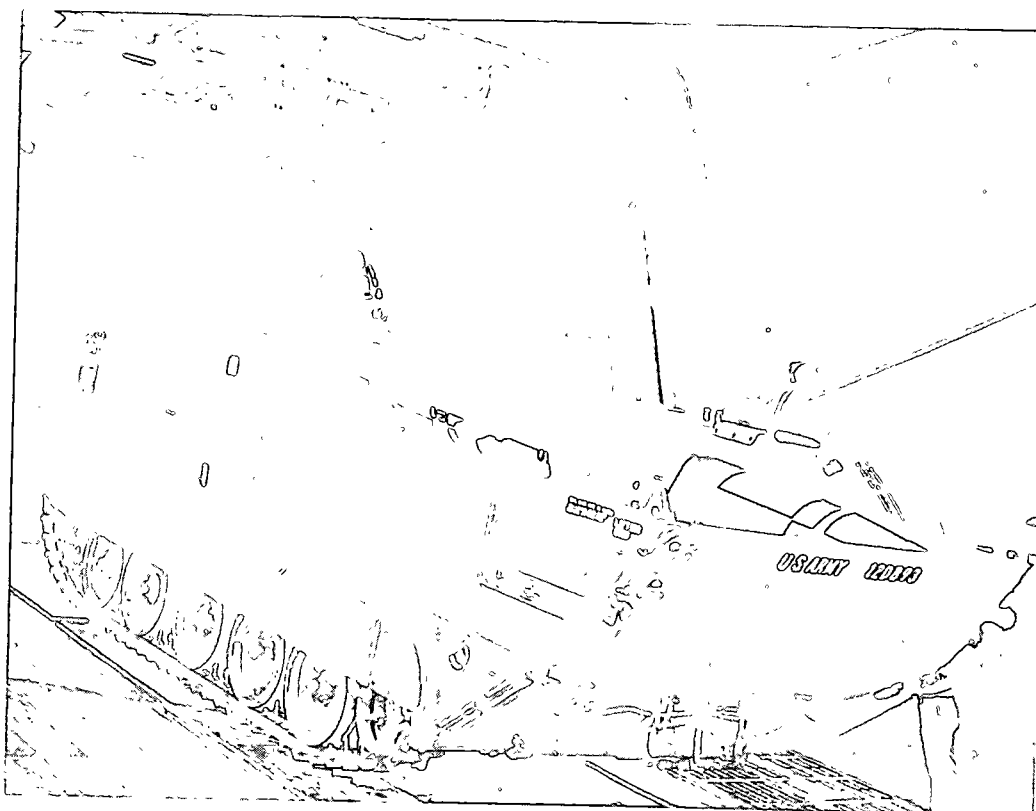


Figure 2-39. Loading the XM688 loader-transporter over the aft ramp.

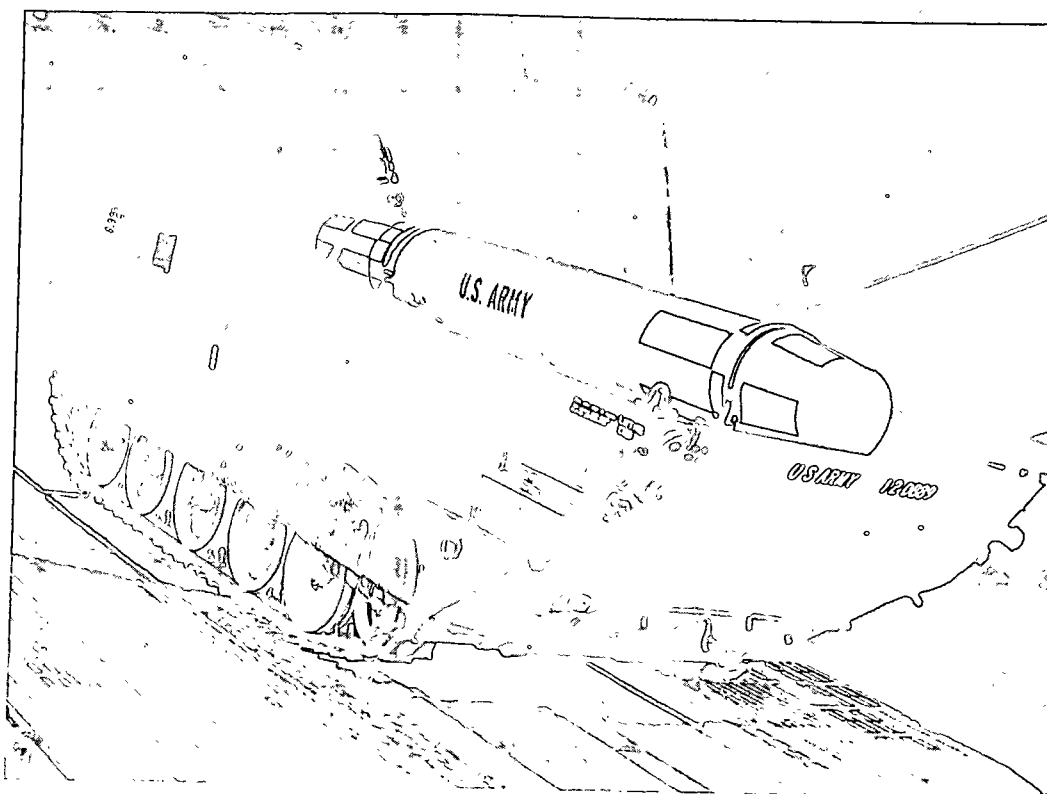
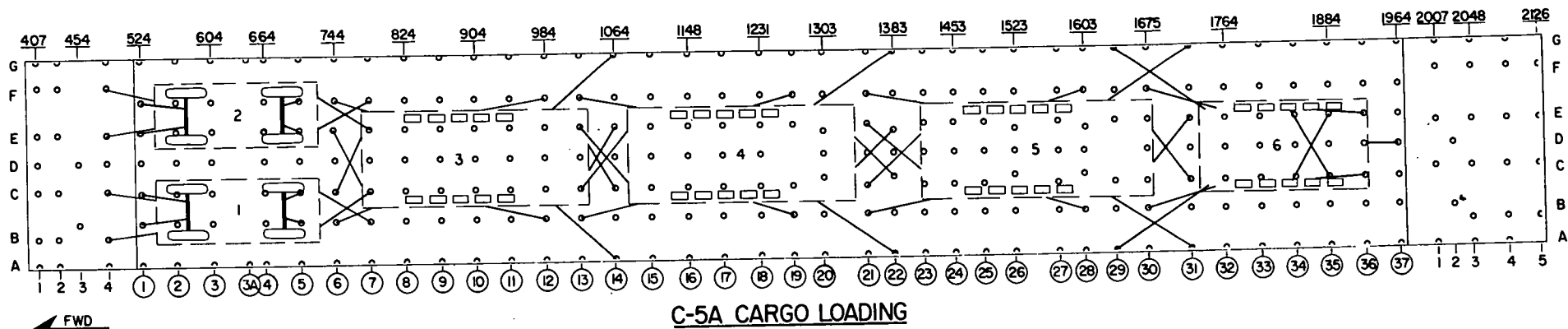


Figure 2-40. Loading the XM687 launcher over the aft ramp.



C-5A CARGO LOADING

LOAD 2-7

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP RP STA	WEIGHT	CUBE	REMARKS
1 TRUCK, CARGO, 3/4-TON, 4x4, WFW M37B1	FWD	FRONT	540	5,820	825
2 TRUCK, CARGO, 3/4-TON, 4x4, WFW M37B1	FWD	FRONT	540	5,820	825
3 LOADER, TRANSPORTER, GM, M688 W12M5L	FWD	FRONT	775	22,900	2,032
4 LOADER, TRANSPORTER, GM, M688 W12M5L	FWD	FRONT	1,085	22,900	2,032
5 LAUNCHER, GUIDED MISSILE, XM687 W12M5L	FWD	FRONT	1,420	22,600	2,310
6 CARRIER, CP, LIGHT, FRACKED, M577	FWD	FRONT	1,730	21,590	1,208 SHORING REQUIRED
TOTALS			101,630	9,232	

50

Figure 2-41. Tiedown diagram for load 2-7.

Table 2-7. Tiedown Data for Load 2-7.

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	B1	1	10,000	Front axle LH side
	C1	1	10,000	Front axle RH side
	B5	1	10,000	Rear axle LH side
	C5	1	10,000	Rear axle RH side
	B7	1	10,000	Clevis at bumperette RH side
	C7	1	10,000	Clevis at bumperette LH side
	B4	1	10,000	Clevis at bumper LH side
	(fwd ramp) C4	1	10,000	Clevis at bumper RH side
	(fwd ramp)			
2	E1	1	10,000	Front axle LH side
	F1	1	10,000	Front axle RH side
	E5	1	10,000	Rear axle LH side
	F5	1	10,000	Rear axle RH side
	E7	1	10,000	Clevis at bumperette RH side
	F7	1	10,000	Clevis at bumperette LH side
	E4	1	10,000	Clevis at bumper LH side
	(fwd ramp) F4	1	10,000	Clevis at bumper RH side
	(fwd ramp)			
3	B6	1	25,000	Ring front on side LH side
	F6	1	25,000	Ring front on side RH side
	C6	1	25,000	Towing clevis RH side
	E6	1	25,000	Towing clevis LH side
	B12	1	25,000	Ring midway on side LH side
	F12	1	25,000	Ring midway on side RH side
	A14	1	25,000	Ring midway on side RH side
	G14	1	25,000	Ring rear on side RH side
	C14	1	25,000	Towing clevis RH side
4	E14	1	25,000	Towing clevis LH side
	B13	1	25,000	Front tiedown ring LH side
	F13	1	25,000	Front tiedown ring RH side
	C13	1	25,000	Towing clevis RH side
	E13	1	25,000	Towing clevis LH side
	B19	1	25,000	Ring midway on side LH side
	F19	1	25,000	Ring midway on side RH side
	A22	2	25,000	Ring rear on side LH side
	G22	2	25,000	Ring rear on side RH side
5	C22	1	25,000	Towing clevis RH side
	E22	1	25,000	Towing clevis LH side
	C21	1	25,000	Towing clevis RH side
	E21	1	25,000	Towing clevis LH side
	B21	1	25,000	Front tiedown ring LH side
	F21	1	25,000	Front tiedown ring RH side
	B28	1	25,000	Ring midway on side LH side
	F28	1	25,000	Ring midway on side RH side
	A31	2	25,000	Ring rear on side LH side
6	G31	2	25,000	Ring rear on side RH side
	C31	1	25,000	Towing clevis RH side
	E31	1	25,000	Towing clevis LH side
	A29	2	25,000	Lifting eye LH side
	G29	2	25,000	Lifting eye RH side
	B30	1	25,000	Drive wheel LH side
	F30	1	25,000	Drive wheel RH side
	C35	1	25,000	Third road wheel axle RH side
	E35	1	25,000	Third road wheel axle LH side
	C36	1	25,000	Fourth road wheel axle LH side
	E36	1	25,000	Fourth road wheel axle RH side
	D37	1	25,000	Pintle hook

Section VIII. LOAD 2-8: ONE CARRIER, COMMAND POST M577A1; TWO GUN, FA, SP, 175MM, M107; ONE CARRIER, PERSONNEL M113 (FIG 2-42)

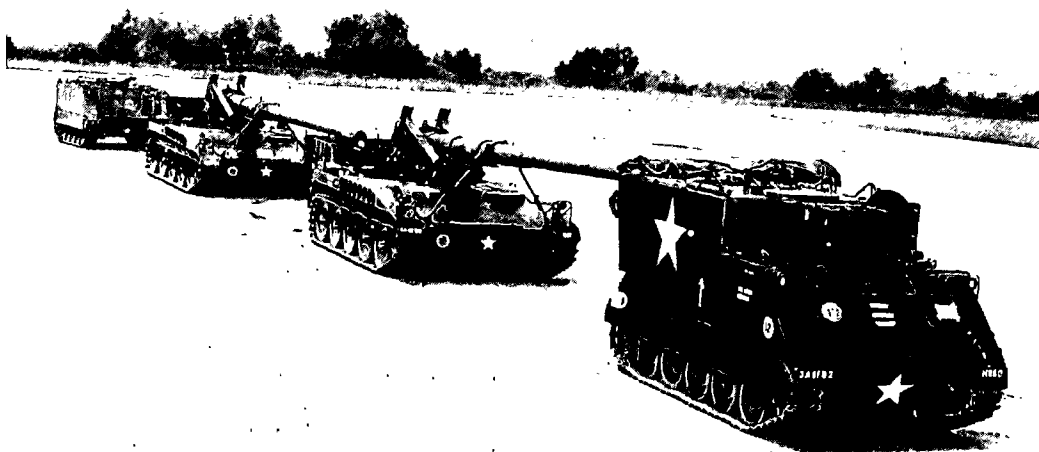


Figure 2-42. Vehicle lineup for load 2-8.

2-57. Aircraft Loading Configuration

Airplane aft kneeled and aft ramp in drive-in mode.

2-58. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6. Barrels of each M107 are placed in depressed position.

2-59. Materiel

Sufficient, minimum ½-inch thick rolling and parking shoring to lay a 24-inch wide path 110 feet long in the airplane for each driveway. A lesser amount of shoring is required for this operation if the shoring is "leap-frogged" as the vehicles are moved into the airplane.

2-60. Personnel and Duties

Six men load each vehicle into the airplane in 4 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring.

2-61. Loading Instructions

a. Position shoring on each driveway from the aft ramp toes into the cargo compartment.

b. Drive the M577 into the cargo compartment

and park with the front of the vehicle at station 585.

c. Place gun barrel of each M107 in the depressed position.

d. Drive the two M107's into the cargo compartment as shown in figures 2-43 and 2-44 and park with the front of each vehicle at station numbers prescribed in tiedown diagram (fig 2-45).

e. Drive the M113 into the cargo compartment and park with front of vehicle at station 1735.

2-62. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

b. *Procedure.* Tie down all items in accordance with the instructions in tiedown diagram (fig 2-45) and tiedown data table 2-8.

2-63. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane level kneeled.

2-64. Offloading Instructions

a. Position shoring on each driveway from station 580 to forward ramp toes.

b. Place the gun barrel of each M107 in the travel position.

c. Offload all vehicles over the forward ramp as shown in figures 2-46 and 2-47.

d. Eight men offload the entire load in 5 minutes.

e. Remove the shoring from the airplane.

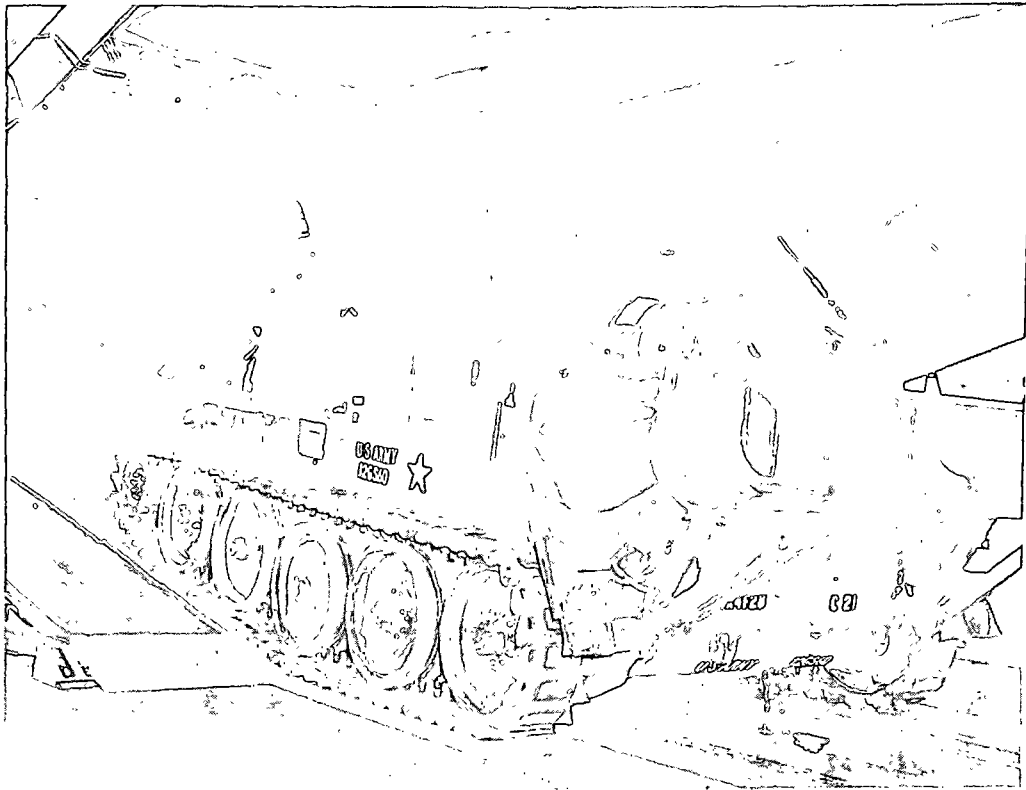


Figure 2-43. Loading the M107 gun over the aft ramp. Note the barrel in the depressed position.

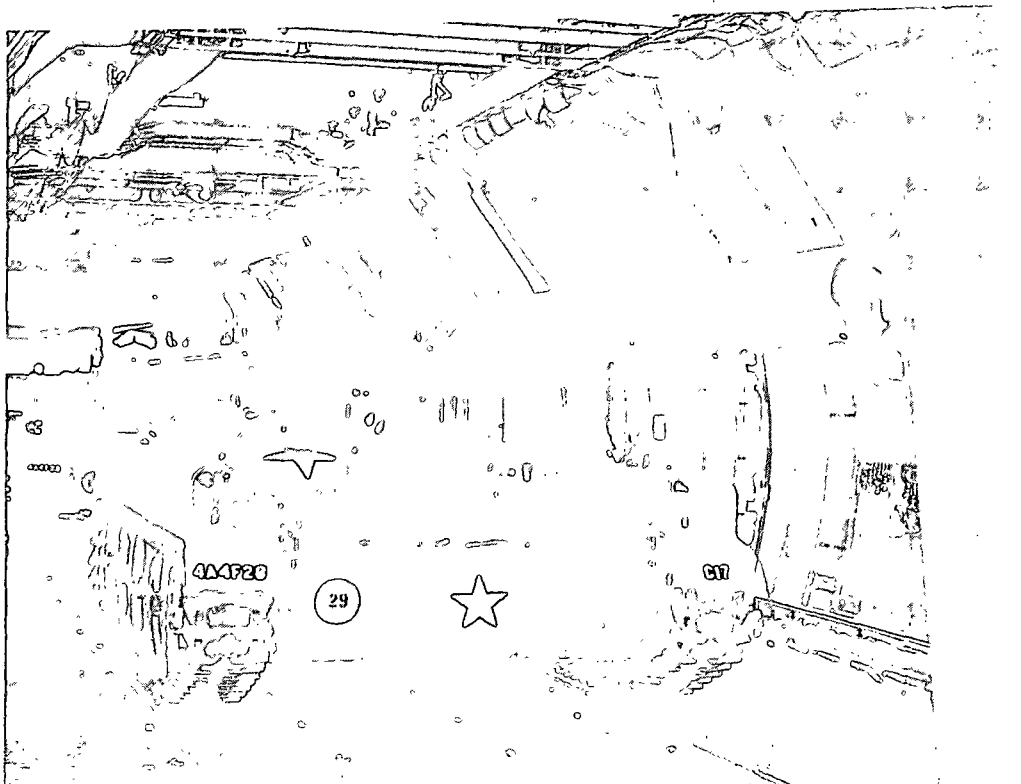
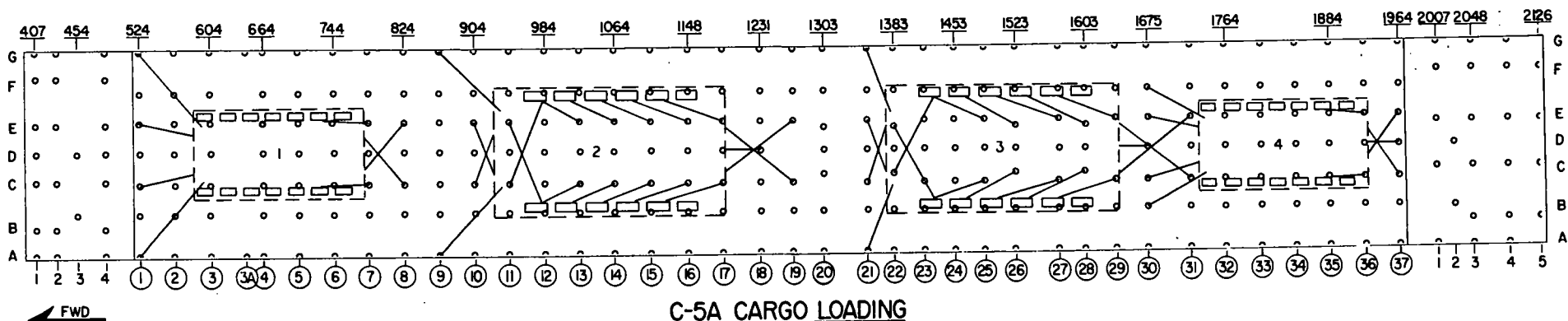


Figure 2-44. Positioning of M107 guns in the cargo compartment.



C-5A CARGO LOADING

LOAD 2-8

	DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP	STA	WEIGHT	CUBE	REMARKS
1	CARRIER, CP, LIGHT, FRACKED, M677	FWD	FRONT	585	21,590	1,208	SHORING REQUIRED
2	GUN, FA, SP, 175MM, M107	FWD	FRONT	925	61,200	3,683	SHORING REQUIRED TUBE DEPRESSED
3	GUN, FA, SP, 175MM, M107	FWD	FRONT	1,375	61,200	3,683	SHORING REQUIRED TUBE DEPRESSED
4	CARRIER, PERSONNEL, FT, ARMORED, M113	FWD	FRONT	1,735	20,030	1,120	SHORING REQUIRED
TOTALS					164,020	9,694	

Figure 2-45. Tiedown diagram for load 2-8.

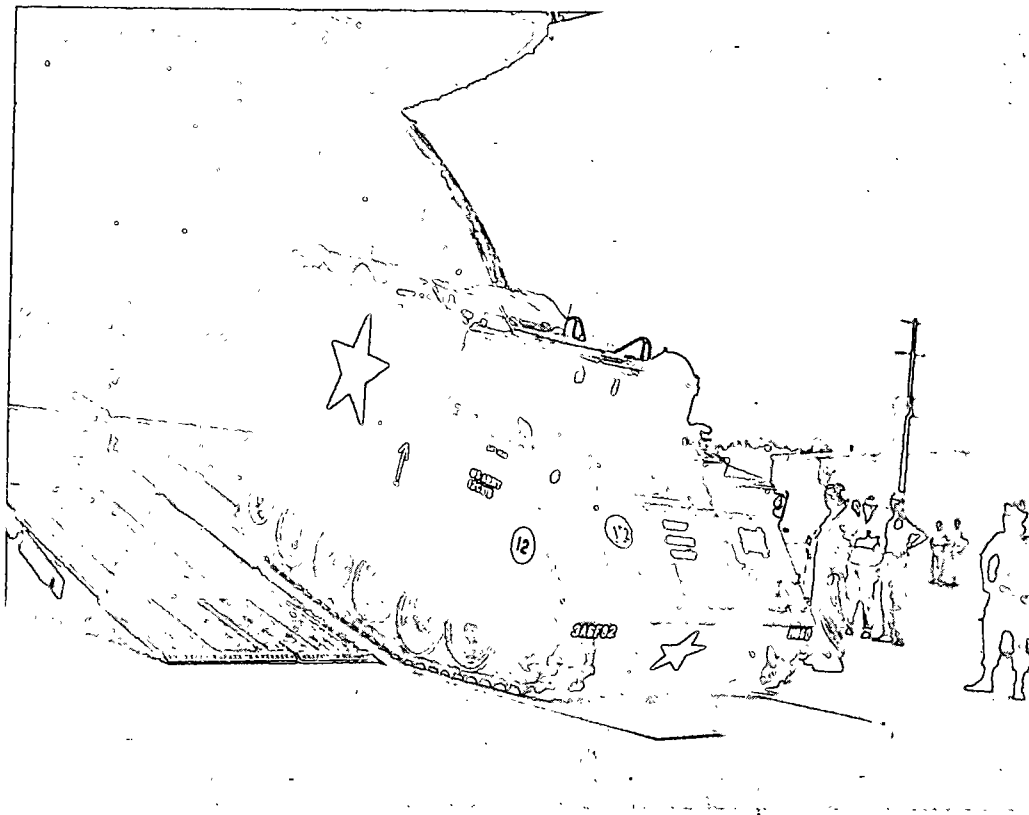


Figure 2-46. Offloading the M577 carrier over the forward ramp.

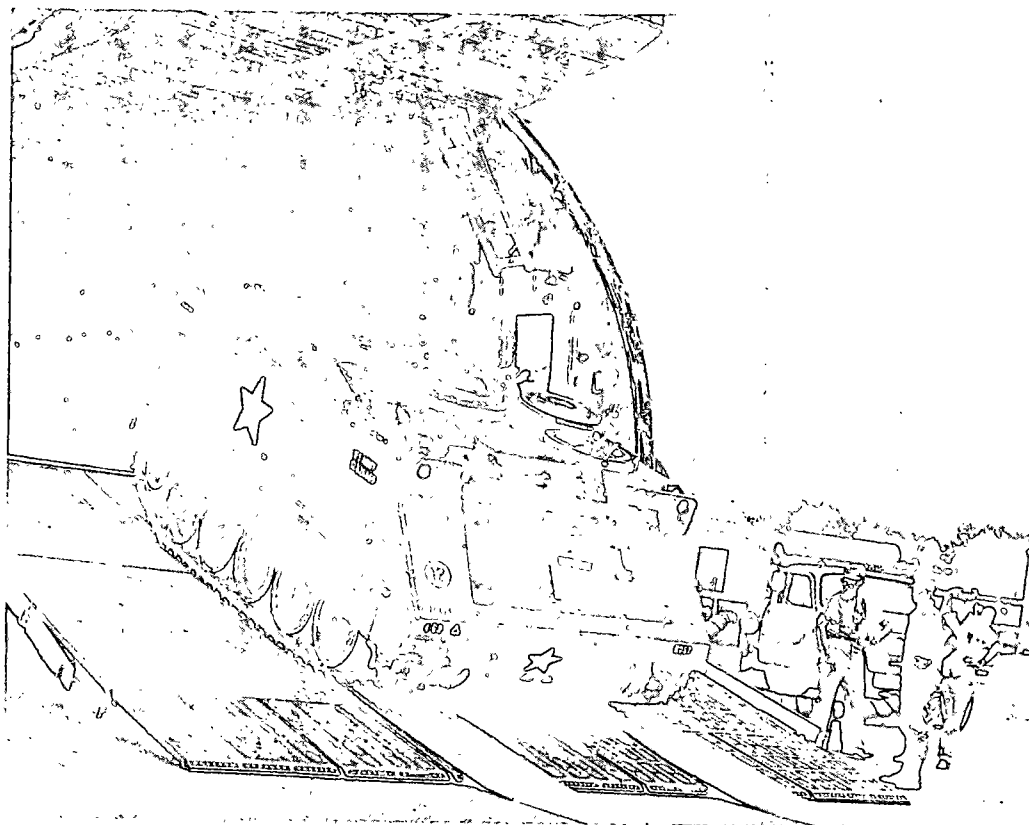


Figure 2-47. Offloading the M113 carrier over the forward ramp.

Table 2-8. Tiedown Data for Load 2-8

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
1	C1	1	25,000	Clevis on towing shackle LH side
	E1	1	25,000	Clevis on towing shackle RH side
	A1	2	25,000	Lifting eye LH side
	G1	2	25,000	Lifting eye RH side
	C7	1	25,000	Fifth wheel axle LH side
	E7	1	25,000	Fifth wheel axle RH side
	D7	1	25,000	Towing hitch
	C8	1	25,000	Clevis on towing shackle RH side
2	E8	1	25,000	Clevis on towing shackle LH side
	A9	2	25,000	Tube support ring LH side
	G9	2	25,000	Tube support ring RH side
	C10	1	25,000	Towing shackle RH side
	E10	1	25,000	Towing shackle LH side
	C11	1	25,000	First wheel axle RH side
	E11	1	25,000	First wheel axle LH side
	C13	1	25,000	First wheel axle LH side
	E13	1	25,000	First wheel axle RH side
	C14	1	25,000	Second wheel axle LH side
	E14	1	25,000	Second wheel axle RH side
	C15	1	25,000	Third wheel axle LH side
	E15	1	25,000	Third wheel axle RH side
	C16	1	25,000	Fourth wheel axle LH side
	E16	1	25,000	Fourth wheel axle RH side
	C17	1	25,000	Fifth wheel axle LH side
	E17	1	25,000	Fifth wheel axle RH side
	D18	1	25,000	Towing hitch
3	C19	1	25,000	Towing shackle RH side
	E19	1	25,000	Towing shackle LH side
	A21	2	25,000	Tube support ring LH side
	G21	2	25,000	Tube support ring RH side
	C21	1	25,000	Towing shackle RH side
	E21	1	25,000	Towing shackle LH side
	C22	1	25,000	First wheel axle RH side
	E22	1	25,000	First wheel axle LH side
	C25	1	25,000	First wheel axle LH side
	E25	1	25,000	First wheel axle RH side
	C26	1	25,000	Second wheel axle LH side
	E26	1	25,000	Second wheel axle RH side
	C27	1	25,000	Third wheel axle LH side
	E27	1	25,000	Third wheel axle RH side
	C28	1	25,000	Fourth wheel axle LH side
	E28	1	25,000	Fourth wheel axle RH side
	C29	1	25,000	Fifth wheel axle LH side
	E29	1	25,000	Fifth wheel axle RH side
4	D30	1	25,000	Towing hitch
	C31	1	25,000	Towing shackle RH side
	E31	1	25,000	Towing shackle LH side
	C30	1	25,000	Clevis on towing shackle LH side
	E30	1	25,000	Clevis on towing shackle RH side
	B30	1	25,000	Lifting eye LH side
	F30	1	25,000	Lifting eye RH side
	C36	1	25,000	Fifth wheel axle LH side
	E36	1	25,000	Fifth wheel axle RH side
	D37	1	25,000	Towing hitch
	C37	1	25,000	Clevis on towing shackle RH side
	E37	1	25,000	Clevis on towing shackle LH side

Section IX. LOAD 2-9: THREE HELICOPTER, UTILITY UH-1D; FOUR HELICOPTER, UTILITY UH-1H; ONE HELICOPTER, OBSERVATION OH-6A; ONE TRUCK, UTILITY, 1/4-TON M151A1; ONE LOADED 463L PALLET (FIG 2-48)

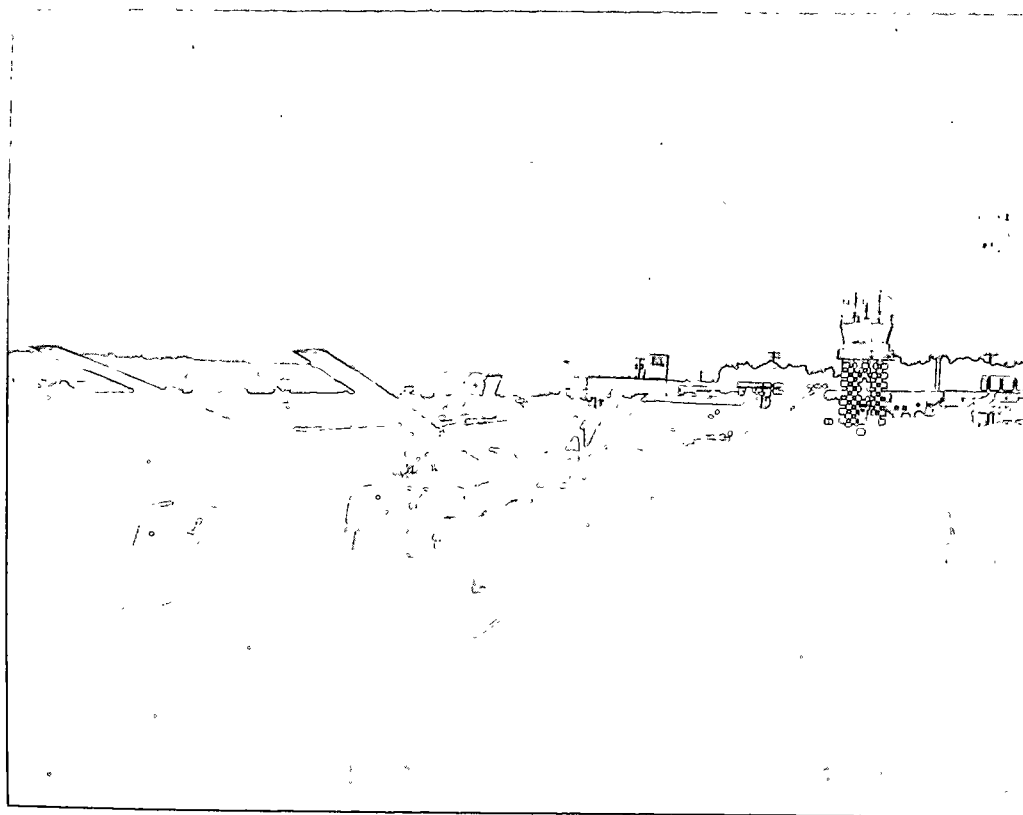


Figure 2-48. Helicopter lineup for load 2-9.

2-65. Airplane Loading Configuration

Airplane forward kneeled and forward ramp in drive-in mode.

2-66. Preparing the Items

a. The UH-1 helicopters are loaded with minimum disassembly. One item, the FM whip antenna, requires removal for loading aboard the airplane, however, in loading maximum items the synchronized elevators, the horizontal stabilizers and the forward cargo doors were also removed.

NOTE

Replacement nuts (8 each) for the stabilizer bar must be made available for reassembly of the stabilizer bar. These nuts are for one time use only.

b. The extent of disassembly for each helicopter depends on its tiedown location. Individual helicopter components are removed only as necessary for clearance.

c. The OH-6A's required removal of two blades and the cargo doors.

2-67. Materiel

a. Eight pieces 2- by 12-inch by 16-foot lumber

to be positioned at the forward ramp toes to form ramp-toe extension.

b. A minimum of two sets of UH-1 ground handling wheels and one set of OH-6A ground handling wheels.

c. Three MB-1 tiedown device chains to form a towing bridle on each helicopter.

d. Sufficient 1/2-inch felt sheeting, salvaged mattresses, or other cushioning material to pad the forward cargo doors, the horizontal stabilizers, the synchronized elevators, and the FM whip antennas for tiedown in each UH-1.

e. Twenty-eight pieces of 2- by 12- by 100-inch lumber for construction of 14 tiedown beams as shown in figure 2-49.

f. Five pounds of 30-penny common nails for the tiedown beams.

2-68. Personnel and Duties

a. Construct 14 tiedown beams (two per UH-1 helicopter) by nailing two pieces of the 100-inch lumber together lengthwise and along their edges.

b. Attach the ground handling wheels to the UH-1 and OH-6A helicopter skids.

c. Form a towing bridle with the three tiedown chains and attach it to the helicopter front cross tube as shown in figure 2-19. The towing bridle is attached to the rear cross tube of those loaded tail-first as shown in figure 2-50.

d. Position the eight pieces of 2- by 12-inch by 16-foot lumber, four pieces for each treadway, at the ramp toes to form a ramp extension.

e. All UH-1 helicopters: Remove forward cargo doors and stow, cushion, and tie down in the helicopters.

f. All UH-1 helicopters: Push the aft cargo doors to the rear and lock in place.

g. All UH-1 helicopters: Remove the outboard synchronized elevators and outboard stabilizer bars. Cushion, stow, and tie them down in the helicopters.

h. All UH-1 helicopters: Remove F11 whip antenna, cushion, stow, and tie it down in the helicopter.

i. One OH-6A helicopter: Remove two rotor blades from the helicopter. The blades are to be placed on mattresses and tied down beside the helicopter when loaded in the airplane.

j. One OH-6A helicopter: Remove the cargo doors and stow, cushion, and tie down in the helicopter.

2-69. Loading Instructions

a. *Materiel.* Sixteen pieces of 1/2-inch by 1- by 8-foot plywood parking shoring, placed under the skids for tiedown of the helicopters.

b. *Personnel and Time.* Ten men load one UH-1 helicopter into the C-5 in 20 minutes. Six men load one OH-6A in 10 minutes. Four men load each truck in 3 minutes.

c. Procedure.

(1) Position the UH-helicopter, facing in the appropriate direction in front of the C-5 forward ramp, in line with the ramp-toe extension as shown in figure 2-18. Attach the airplane winch cable hook to the towing bridle.

(2) Station the 10-man loading team: Four men at the empannage; two men at the cargo door openings; one man on top of the helicopter cabin to observe overhead clearance, to manipulate the rotor components to prevent contact with the airplane; two men to hold each rotor blade tiedown strap to control the blades; and the leader who moves about as best to observe the loading and give instructions.

(3) Winch the helicopter up the ramp into the airplane.

(4) The men at the empannage move the tail up or down as necessary to prevent contact with the airplane that could result in damage. They keep the tail raised until the helicopter is past the ramp hinge, then loading is halted.

(5) Unhook the winch cable, remove the

towing bridle, and manhandle the helicopter to tiedown location onto the parking shoring.

(6) Remove the ground handling wheels.

(7) Load the remaining helicopters in numbered sequence.

(8) Position the OH-6A helicopter facing in the appropriate direction in front of the C-5 ramp, in line with the ramp-toe extension.

(9) Station the six man loading team: two men at the empannage; two men at the cargo door openings; one man to control the rotor blades; and the leader who moves about as best to observe the loading and give instructions as shown in figure 2-51.

(10) Manhandle the helicopter up the ramp into the airplane.

(11) Manhandle the helicopter to its tiedown location onto the parking shoring.

(12) Raise the ground handling wheels.

(13) Position the trucks facing in the appropriate direction at the ramp toes and back up the ramp to its tiedown location.

2-70. Tiedown (See Caution in Paragraph 1-9 c)

a. Materiel.

(1) Minimum of 152 CGU-1B tiedown devices are required for tiedown of the helicopters.

(2) Sixteen pieces of 1/2- by 12- by 30-inch felt sheeting, used under the tiedown straps where they are wrapped around the rotor blades as shown in figure 2-52.

(3) Thirty-two pieces of 1/2- by 12- by 30-inch felt sheeting, used under the tiedown straps at the end of the tiedown beams in the UH-1 helicopters, and under the straps passing through the OH-6A helicopter cargo compartment.

b. *Personnel and Time.* Eight men tie down one UH-1 helicopter in 15 minutes. Four men tie down one OH-6A helicopter in 10 minutes. Four men tie down the truck in 5 minutes.

c. Procedure.

(1) Position two tiedown beams across the floor of each helicopter cargo compartment as shown in figure 2-49.

(2) Tie down the helicopters and trucks in accordance with the instructions in tiedown diagram (fig 2-53) and tiedown data table 2-9.

(3) Place one sheet of 12-by 30-inch felt under each tiedown strap where it is wrapped around a rotor blade, as shown in figure 2-52. Place one sheet of 12-by 18-inch felt under each tiedown strap where the strap passes over the end of a tiedown beam, as shown in figure 2-49.

2-71. Airplane Offloading Configuration

Airplane forward kneeled and forward ramp in drive-off mode.

2-72. Offloading Instructions

a. Material.

(1) A minimum of two sets of UH-1 ground handling wheels and one set of OH-6A ground handling wheels.

(2) Three MB-1 tiedown device chains for the towing bridle.

(3) Eight pieces 2- by 12-inch by 16-foot lumber to be positioned at the forward ramp toes to form a ramp-toe extension.

b. *Personnel and time.* Eight men install the ground handling wheels and towing bridle, and offload one helicopter from the C-5 in 15 minutes.

c. *Procedure.* Offloading is the reverse of loading, except the winch is used for braking the helicopter as it is manhandled down the ramp. A limber ramp-toe extension is required. Remove parking shoring from the airplane as each helicopter is offloaded.

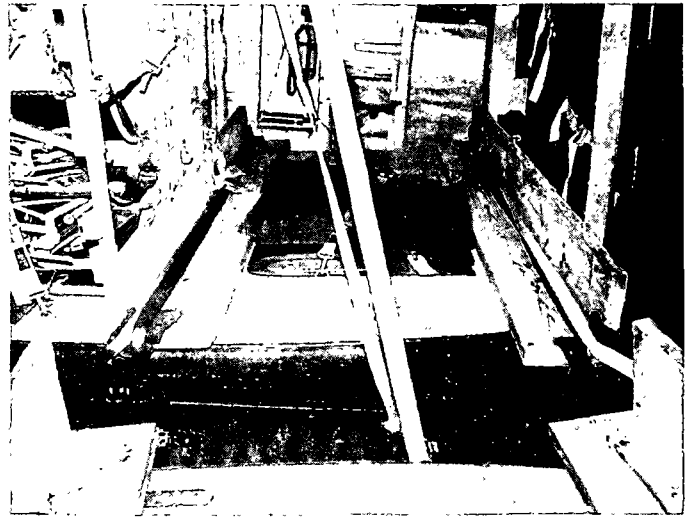


Figure 2-49. Tiedown beams used in restraining UH-1 helicopters.

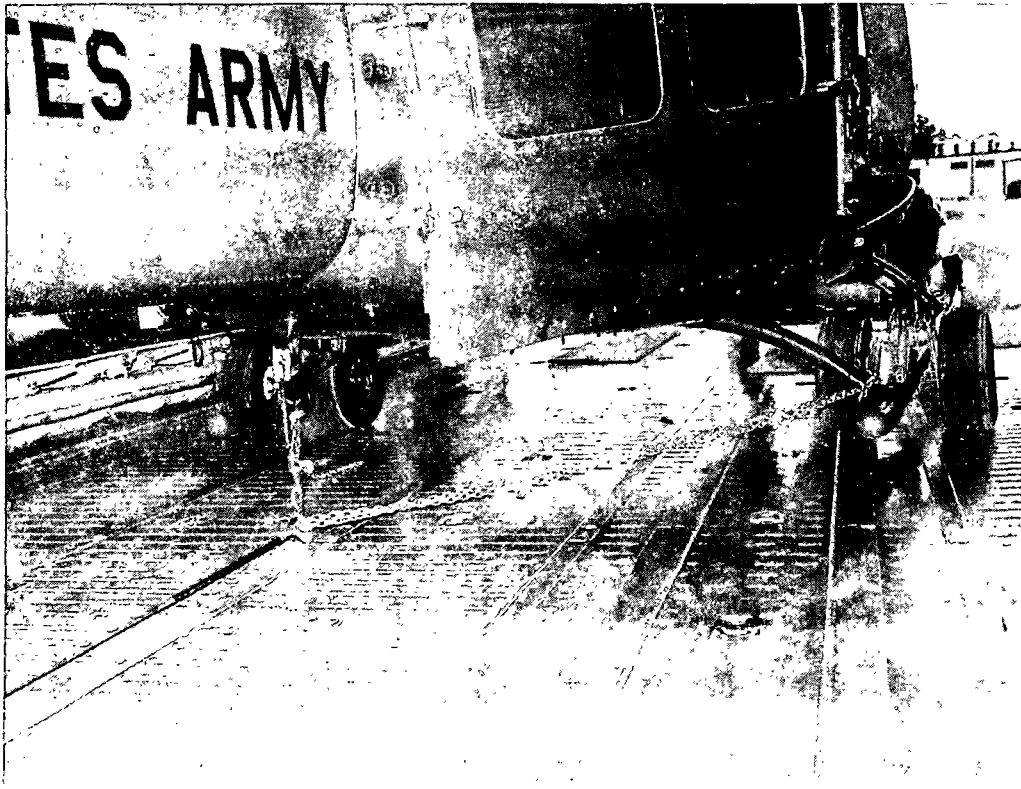


Figure 2-50. Towing bridle attached to rear cross tube when loading the UH-1 tail-first.

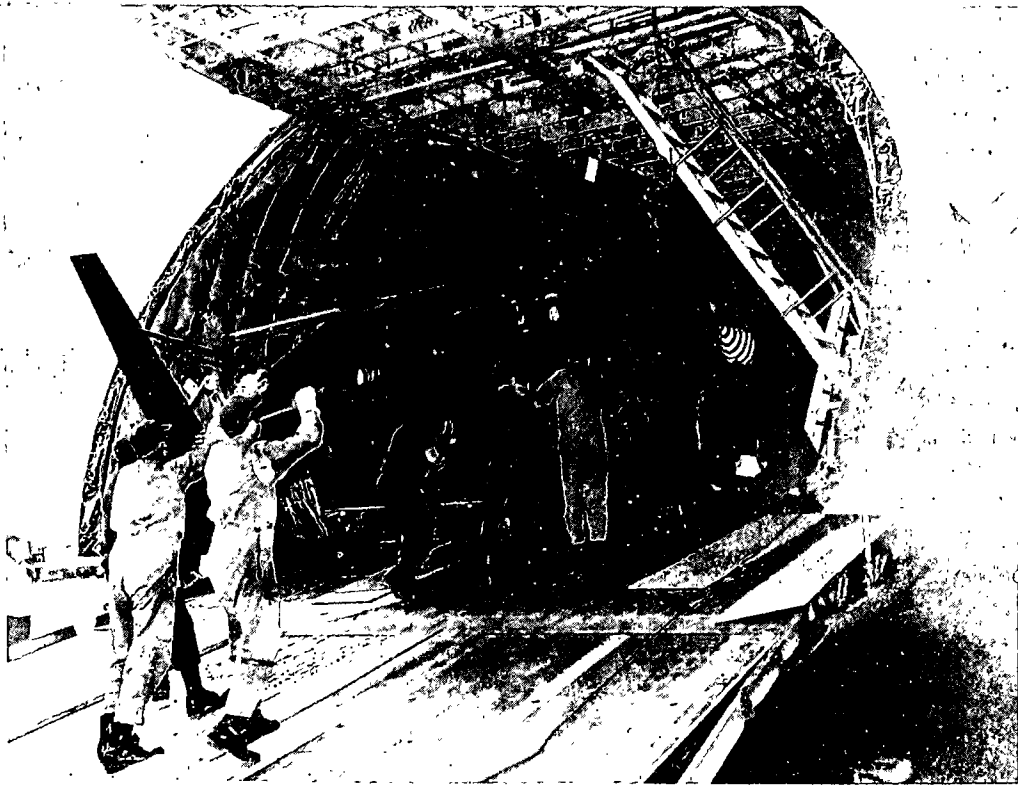


Figure 2-51. Loading the UH-6A helicopter into the airplane over the forward ramp.

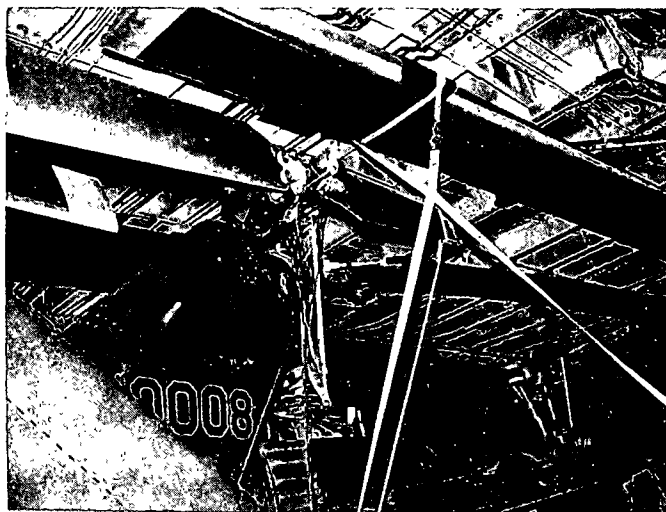
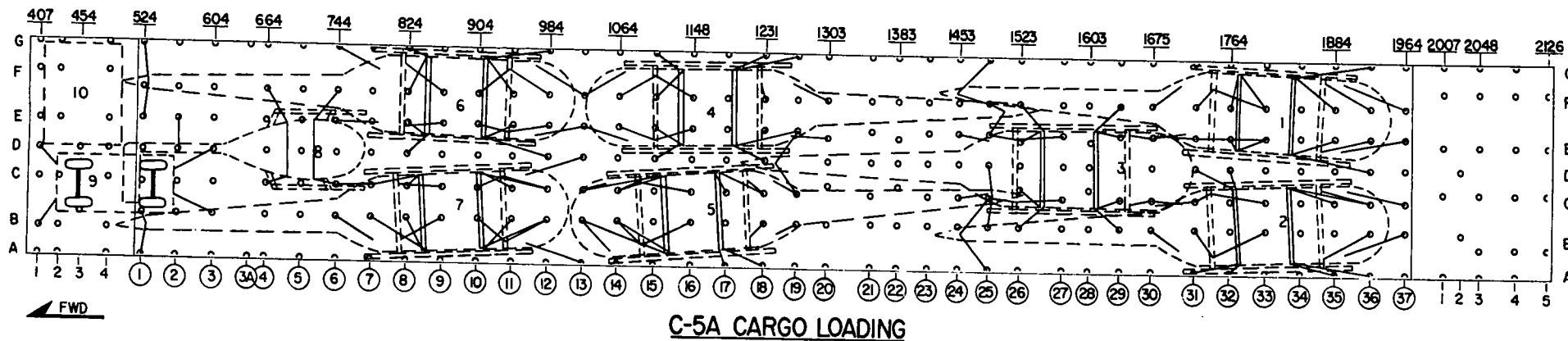


Figure 2-52. UH-1 helicopter rotor blade restrained.



LOAD 2-9

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	STA			
1 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1,400	6,500	9,066	SHORING REQUIRED
2 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1,400	6,500	9,066	SHORING REQUIRED
3 HELICOPTER, UTILITY, UH-1D	AFT	TAIL	1,210	6,250	9,066	SHORING REQUIRED
4 HELICOPTER, UTILITY, UH-1H	FWD	TAIL	1,520	6,500	9,066	SHORING REQUIRED
5 HELICOPTER, UTILITY, UH-1D	FWD	TAIL	1,530	4,250	9,066	SHORING REQUIRED
6 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	500	6,500	9,066	SHORING REQUIRED
7 HELICOPTER, UTILITY, UH-1D	AFT	TAIL	505	6,250	9,066	SHORING REQUIRED
8 HELICOPTER, OBSERVATION, OH-6A	AFT	TAIL	500	1,510	5,305	SHORING REQUIRED
9 TRUCK, UTILITY, 1/4-TON, 4x4, M35A1	FWD	FRONT	420	2,350	370	
10 PALLET, 463L	-	FWD RAMP	-	3,500	200	
TOTALS				52,110	70,647	

Figure 2-53. Tiedown diagram for load 2-9.

Table 2-9. Tiedown Data for Load 2-9

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E36	1	5,000	Front cross tube RH side
	F36	1	5,000	Front cross tube LH side
	E31 / E33	1	5,000	Rear cross tube RH side
	F31 / F33	1	5,000	Rear cross tube LH side
	E37	1	5,000	Front mooring ring RH side
	F37	1	5,000	Front mooring ring LH side
	E30	1	5,000	Rear mooring ring RH side
	F30	1	5,000	Rear mooring ring LH side
	E32 / F32	2	5,000	Through cargo compartment
	E33 / F33	2	5,000	Through cargo compartment
	E35 / F35	2	5,000	Through cargo compartment
	D36 / G36	2	5,000	Through cargo compartment
	E37 / G37	2	5,000	Around front rotor blade
	E26 / G26	2	5,000	Around rear rotor blade
	E25 / F25	1	5,000	Around tail skid
2	B36	1	5,000	Front cross tube RH side
	C36	1	5,000	Front cross tube LH side
	B31 / B33	1	5,000	Rear cross tube RH side
	C31 / C33	1	5,000	Rear cross tube LH side
	B37	1	5,000	Front mooring ring RH side
	C37	1	5,000	Front mooring ring LH side
	B30	1	5,000	Rear mooring ring RH side
	C30	1	5,000	Rear mooring ring LH side
	A32 / C32	2	5,000	Through cargo compartment
	A33 / C33	2	5,000	Through cargo compartment
	A35 / C35	2	5,000	Through cargo compartment
	A36 / C36	2	5,000	Through cargo compartment
	A37 / C37	2	5,000	Around front rotor blade
	A28 / C25	2	5,000	Around rear rotor blade
	A25 / C25	1	5,000	Around tail skid
3	C30	1	5,000	Front cross tube RH side
	E30	1	5,000	Front cross tube LH side
	C26 / 27	1	5,000	Rear cross tube RH side
	E26 / 27	1	5,000	Rear cross tube LH side
	C31	1	5,000	Front mooring ring RH side
	E31	1	5,000	Front mooring ring LH side
	C24	1	5,000	Rear mooring ring RH side
	E24	1	5,000	Rear mooring ring LH side
	B29 / F29	2	5,000	Through cargo compartment
	C29 / F29	2	5,000	Through cargo compartment
	B26 / F26	2	5,000	Through cargo compartment
	C26 / E26	2	5,000	Through cargo compartment
	C / E34	2	5,000	Around front rotor blade
	C20 / G21	2	5,000	Around rear rotor blade
	C / E28	1	5,000	Around tail skid
4	F14 / F16	1	5,000	Front cross tube RH side
	E14 / E16	1	5,000	Front cross tube LH side
	F18	1	5,000	Rear cross tube RH side
	E18	1	5,000	Rear cross tube LH side
	F13	1	5,000	Front mooring ring RH side
	E13	1	5,000	Front mooring ring LH side
	F18	1	5,000	Rear mooring ring RH side
	E18	1	5,000	Rear mooring ring LH side
	E13 / F13	2	5,000	Through cargo compartment
	E14 / F14	2	5,000	Through cargo compartment
	E17 / G17	2	5,000	Through cargo compartment
	E18 / G18	2	5,000	Through cargo compartment
	D11 / G11	2	5,000	Around front rotor blade
	D23 / G24	2	5,000	Around rear rotor blade
	E25 / F25	1	5,000	Around tail skid

Table 2-9—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
5	B14 / B16	1	5,000	Front cross tube LH side
	C14 / C16	1	5,000	Front cross tube RH side
	B18	1	5,000	Rear cross tube LH side
	C18	1	5,000	Rear cross tube RH side
	B13	1	5,000	Front mooring ring LH side
	C13	1	5,000	Front mooring ring RH side
	B18	1	5,000	Rear mooring ring LH side
	C18	1	5,000	Rear mooring ring RH side
	B13 / C13	2	5,000	Through cargo compartment
	B14 / C14	2	5,000	Through cargo compartment
	A17 / C17	2	5,000	Through cargo compartment
	A18 / C18	2	5,000	Through cargo compartment
	Ring On			
	Skid Tube	2	5,000	Around front rotor blade
6	A24 / D23	2	5,000	Around rear rotor blade
	B25 / C25	1	5,000	Around tail skid
	E10 / E12	1	5,000	Front cross tube RH side
	F10 / F12	1	5,000	Front cross tube LH side
	E11	1	5,000	Rear cross tube RH side
	F11	1	5,000	Rear cross tube LH side
	E13	1	5,000	Front mooring ring RH side
	F13	1	5,000	Front mooring ring LH side
	E7	1	5,000	Rear mooring ring RH side
	F7	1	5,000	Rear mooring ring LH side
	E8 / F18	2	5,000	Through cargo compartment
	E9 / F9	2	5,000	Through cargo compartment
	E11 / F11	2	5,000	Through cargo compartment
	E12 / F12	2	5,000	Through cargo compartment
7	D14 / G14	2	5,000	Around front rotor blade
	D3 / F3	2	5,000	Around rear rotor blade
	E1 / F1	1	5,000	Around tail skid
	C10 / C12	1	5,000	Front cross tube LH side
	B10 / B12	1	5,000	Front cross tube RH side
	C11	1	5,000	Rear cross tube LH side
	B11	1	5,000	Rear cross tube RH side
	C13	1	5,000	Front mooring ring LH side
	B13	1	5,000	Front mooring ring RH side
	C7	1	5,000	Rear mooring ring LH side
	B7	1	5,000	Rear mooring ring RH side
	B8 / C8	2	5,000	Through cargo compartment
	B9 / C9	2	5,000	Through cargo compartment
	B11 / C11	2	5,000	Through cargo compartment
	B12 / C12	2	5,000	Through cargo compartment
8	Ring On			
	Skid Tube	2	5,000	Around front rotor blade
	A3 / C3	2	5,000	Around rear rotor blade
	B1 / C1	1	5,000	Around tail skid
9	C4 / F4	2	5,000	Through cargo compartment
	C6 / F6	2	5,000	Through cargo compartment
10	B4 Fwd	Ramp	10,000	Front clevis LH side
	D4 Fwd	Ramp	10,000	Front clevis RH side
	B3 Fwd	Ramp	10,000	Rear clevis LH side
	D3 Fwd	Ramp	10,000	Rear clevis RH side
10	Fwd	Ramp	RH Side	463L Pallet

Section X. LOAD 2-10: TWO HELICOPTER, UTILITY UN-1D; FOUR HELICOPTER, UTILITY UN-1H; ONE TRUCK, UTILITY 1/4-TON M151A1; ONE TRAILER, CARGO 1/4-TON M416; ONE TRUCK, CARGO 3/4-TON W/ WN M34B1; ONE TRAILER, CARGO 3/4-TON M101A1; THREE 463 PALLET W/ TWO 500 GALLON FUEL CELLS EACH (FIG 2-54)

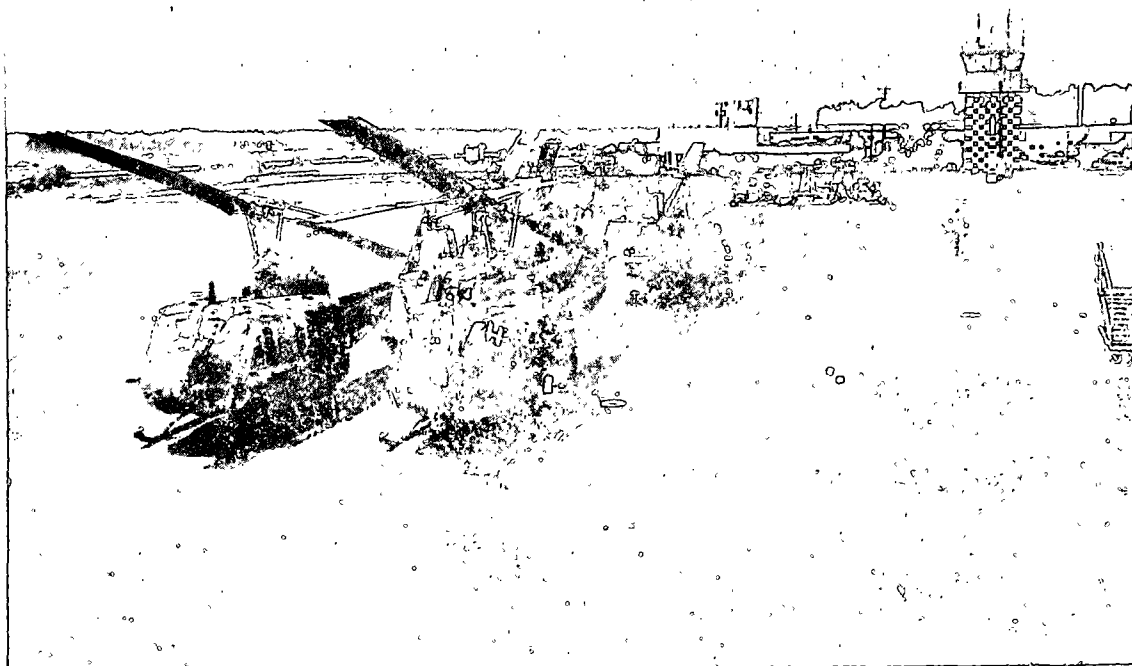


Figure 2-54. Helicopter line-up for load 2-10.

2-73. Airplane Loading Configuration

Airplane forward kneeled and both ramps in drive-in mode.

2-74. Preparing The Items

Prepare the vehicles in accordance with instructions in paragraph 1-6.

Prepare the UH-1 helicopters in accordance with procedures in Load 2-9.

2-75. Materiel

a Eight pieces 2-by 12-inch by 16-foot lumber to be positioned at the forward ramp toes to form ramp-toe extension.

b. A minimum of two sets of UH-1 ground handling wheels.

c Three MB-1 tiedown device chains to form a towing bridle on each helicopter.

d. Sufficient 1/2-inch felt sheeting, salvaged mattresses, or other cushioning material to pad the forward cargo doors, the horizontal stabilizers, the synchronized elevators, and the FM whip antennas for tiedown in each UH-1.

e Twenty-four pieces 2-by 12-by 100-inch lumber for construction of 12 tiedown beams.

f Five pounds of 30-penny common nails for the tiedown beams.

2-76. Personnel and Duties

a. Construct 12 tiedown beams (two per UH-1 helicopter) by nailing two pieces of the 100-inch lumber together lengthwise and along their edges as shown in figure 2-49.

b Attach the ground handling wheels to the UH-1 helicopter skids.

c. Form a towing bridle with the three tiedown chains and attach it to the helicopter cross tube as shown in figure 2-19. The towing bridle is attached to the front cross tube of front-first loaded helicopters, and to the rear cross tube of those loaded tail-first as shown in figure 2-50.

d. Position the eight pieces of 2-by 12-inch by 16-foot lumber, eight pieces for each treadway, at the ramp toes to form a ramp extension as shown in figure 2-55.

e. All UH-1 helicopters: Remove forward cargo doors and stow, cushion, and tie down in the helicopters as shown in figure 2-56.

f. All UH-1 helicopters: Push the aft cargo doors to the rear and lock in place.

g. All UH-1 helicopters: Remove the outboard synchronized elevators and outboard stabilizer bars.

h. All UH-1 helicopters: Remove the FM whip antenna. Cushion, stow, and tie it down in the helicopter.

2-77. Loading Instructions

a. *Materiel.* Twelve pieces of ½-inch by 1- by 8-foot plywood parking shoring, placed under the skids for tiedown of the helicopters.

b. *Personnel and Time.* Ten men load one UH-1 helicopter into the airplane in 20 minutes. Two men load each truck / trailer combination in 3 minutes.

c. *Procedure.*

(1) Position the helicopter, facing in the appropriate direction in front of the airplane forward ramp, in line with the ramp-toe extension as shown in figure 2-18. Attach the airplane winch cable hook to the towing bridle as shown in figure 2-19.

(2) Station the 10-man loading team: four men at the empannage; two men at the cargo door opening; one man on top of the helicopter cabin to observe overhead clearance, to manipulate the rotor components to prevent contact with the airplane; two men to hold each rotor blade strap to control the blades; and the leader who moves about as best to observe the loading and give instructions as shown in figure 2-57.

(3) Winch the helicopter up the ramp into the airplane.

(4) The men at the empannage move the tail up or down as necessary to prevent contact with the airplane that could result in damage. They keep the tail raised until the helicopter is past the ramp hinge, then loading is halted.

(5) Unhook the winch cable, remove the towing bridle, and manhandle the helicopter to its tiedown location on the parking shoring.

(6) Remove the ground handling wheels.

(7) Load the remaining helicopters in numbered sequence.

(8) Back the ¼-ton truck up the forward ramp to its tiedown location.

(9) Manhandle the ¼-ton trailer up the forward ramp to its tiedown location. Place a small piece of shoring under the lunette.

(10) Drive the ¾-ton truck / trailer combination up the aft ramp to its tiedown location in the airplane.

(11) Load the three 463L pallets in their

proper location in the airplane through the forward end of the airplane as shown in figure 2-59.

2-78. Tiedown (See Caution in Paragraph 1-9 c)

a. *Materiel.*

(1) Minimum of 126 CGU-1B tiedown devices are required for tiedown of the helicopters.

(2) Twelve pieces of ½- by 12- by 30-inch felt sheeting, used under the tiedown straps where they are wrapped around the rotor blades.

(3) Twenty-four pieces of ½- by 12- by 18-inch felt sheeting, used under the tiedown straps at the end of the tiedown beams on the helicopters as shown in figure 2-52.

b. *Personnel and Time.* Eight men tie down one UH-1 helicopter in 15 minutes. Eight men tie down the vehicles in 10 minutes.

c. *Procedure.*

(1) Position two tiedown beams across the floor of each helicopter cargo compartment as shown in figure 2-52.

(2) Tie down the helicopters and vehicles in accordance with the instructions in tiedown data table 2-10, tiedown diagram (fig 2-59), figure 2-58, and figures 2-60 through 2-62.

(3) Place one sheet of 12- by 30-inch felt under each tiedown strap where it is wrapped around a rotor blade, as shown in figure 2-52. Place one sheet of 12- by 18-inch felt under each tiedown where the strap passes over the end of a tiedown beam, as shown in figure 2-49.

2-79. Airplane Offloading Configuration

Airplane forward kneeled and forward ramp in drive-off mode.

2-80. Offloading Instructions

a. *Materiel.*

(1) A minimum of two sets of UH-1 ground handling wheels.

(2) Three MB-1 tiedown device chains for the helicopter towing bridle.

(3) Eight pieces 2- by 12-inch by 16-foot lumber to be positioned at the forward ramp toes to form a ramp toe extension when offloading the helicopters.

b. *Personnel and Time.* Eight men install the ground handling wheels and towing bridle, and offload one helicopter from the airplane in 15 minutes.

c. *Procedure.* Offloading is the reverse of loading, except the winch is used for braking the helicopter as it is manhandled down the ramp. A lumber ramp-toe extension is required. Remove parking shoring from the airplane as each helicopter is offloaded.

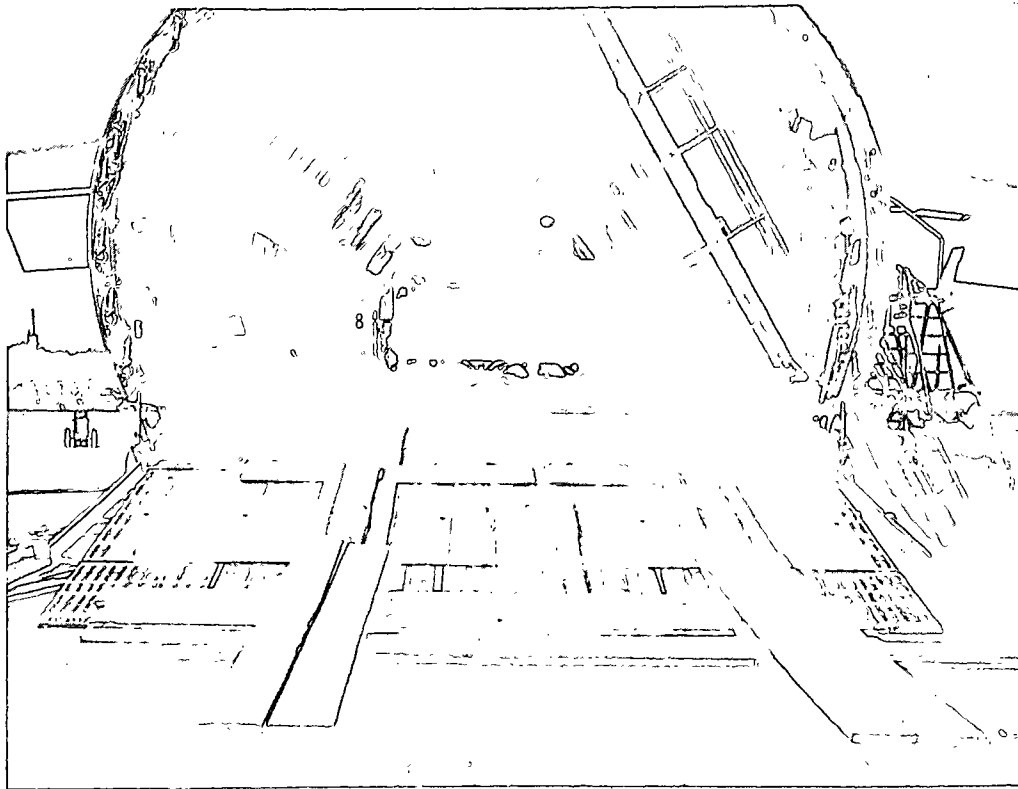


Figure 2-55. Ramp-toe extension formed to decrease ramp angle when loading the UH-1 helicopter.

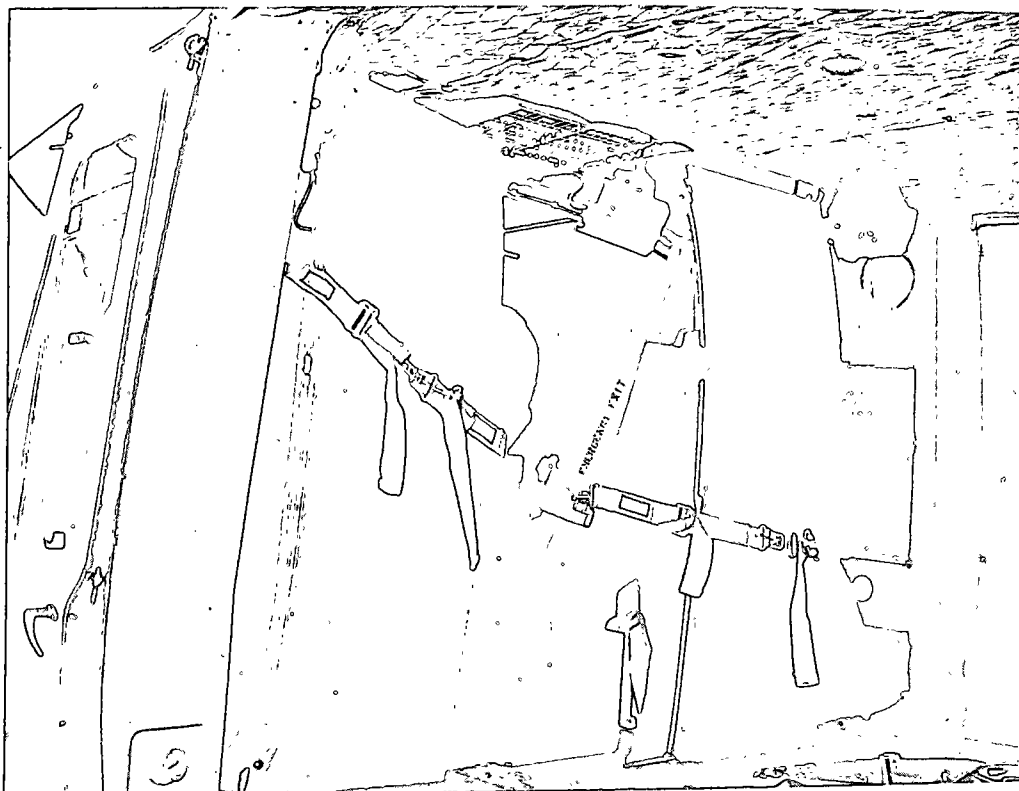


Figure 2-56. Tiedown of forward cargo doors in the UH-1 helicopter.

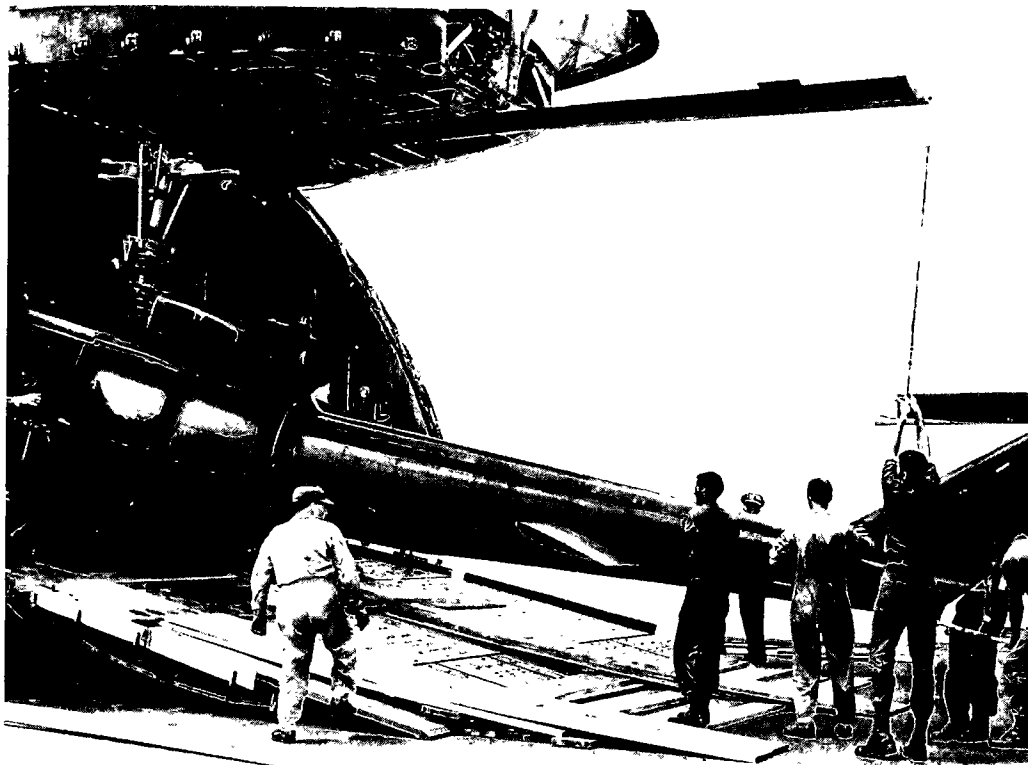


Figure 2-57. Loading team controlling the UH-1 helicopter as it is winched up the forward ramp.

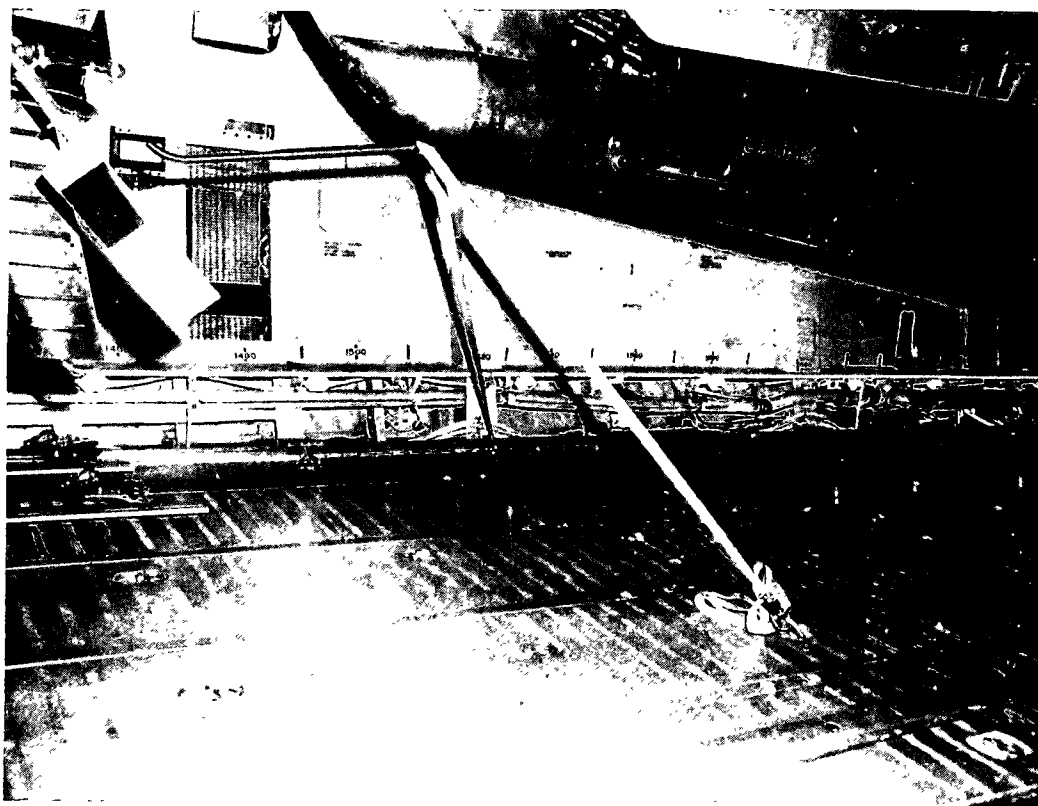
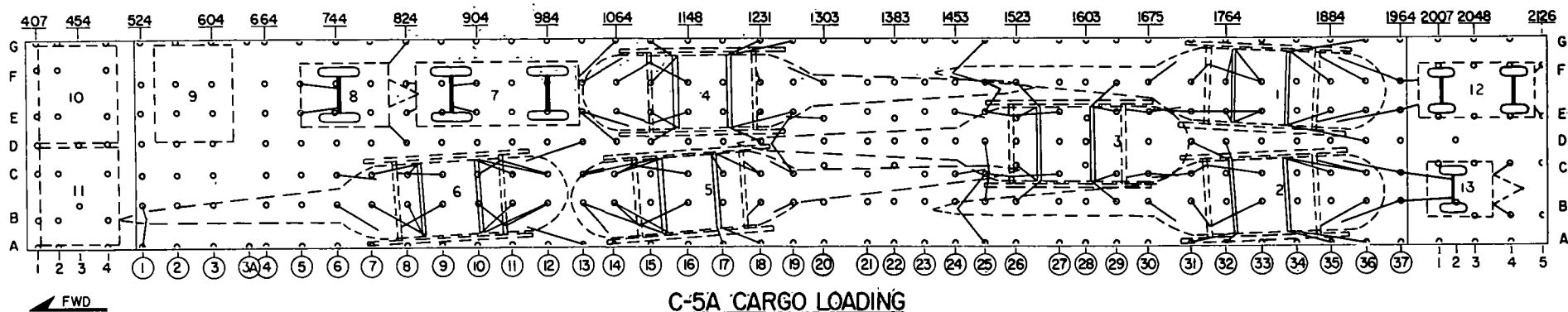


Figure 2-58. Tiedown of UH-1 helicopter tail skid.



LOAD 2-10

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP	STA	WEIGHT	CUBE	REMARKS
1 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1,440	6,500	9,066	SHORING REQUIRED
2 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1,443	6,500	9,066	SHORING REQUIRED
3 HELICOPTER, UTILITY, UH-1D	AFT	TAIL	1,215	6,250	9,066	SHORING REQUIRED
4 HELICOPTER, UTILITY, UH-1H	FWD	TAIL	1,555	6,500	9,066	SHORING REQUIRED
5 HELICOPTER, UTILITY, UH-1H	FWD	TAIL	1,555	6,500	9,066	SHORING REQUIRED
6 HELICOPTER, UTILITY, UH-1D	AFT	TAIL	705	6,250	9,066	SHORING REQUIRED
7 TRUCK, CARGO, 3/4-TON, 4x4, WW M37B1	AFT	FRONT	1,045	5,820	846	
8 TRAILER, UTILITY, CARGO, 3/4-TON, M101A1	AFT	REAR	705	1,280	519	
9 PALLET, 463L (WITH TWO 500-GAL FUEL CELLS)	-	FWD EDGE	-	680	200	
10 PALLET, 463L (WITH TWO 500-GAL FUEL CELLS)	-	FWD RAMP	-	680	200	
11 PALLET, 463L (WITH TWO 500-GAL FUEL CELLS)	-	FWD RAMP	-	680	200	
12 TRUCK, UTILITY, 1/4-TON, 4x4, M151A1	AFT	FRONT	2,115	2,350	370	
13 TRAILER, UTILITY, CARGO, 1/4-TON, M416	AFT	REAR	1,995	590	170	
TOTALS				50,560	94,901	

Figure 2-59. Tiedown diagram for Load 2-10.

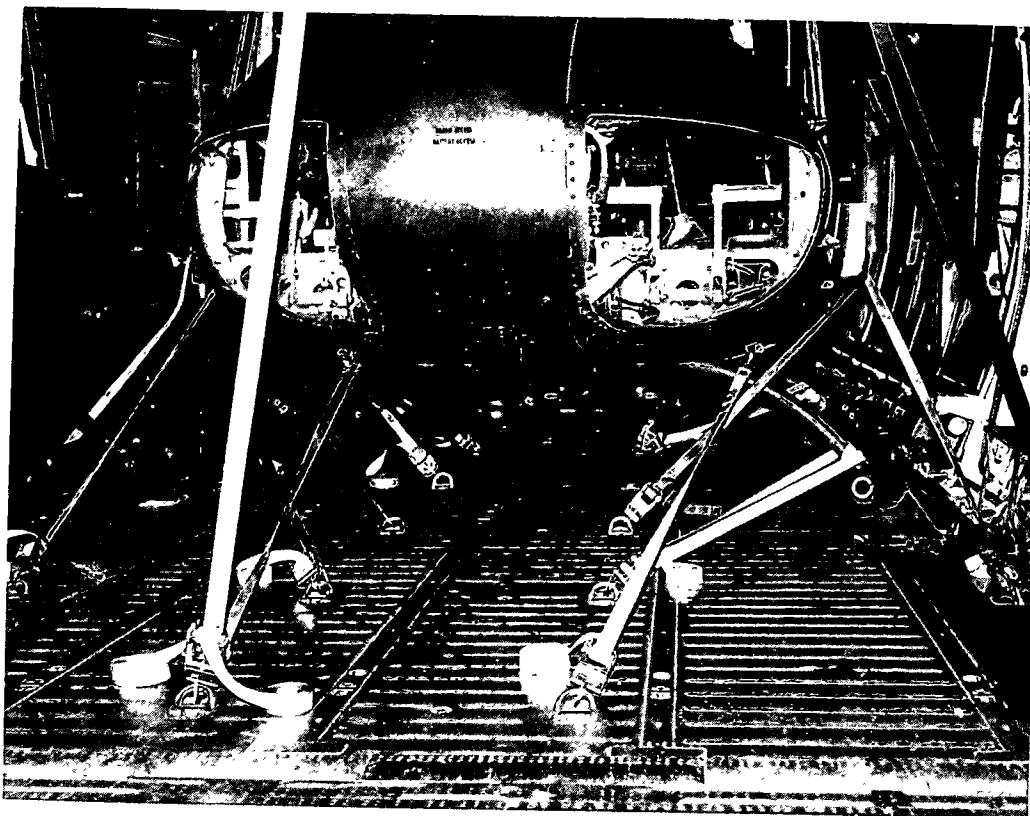


Figure 2-60. Tiedown of the UH-1 helicopter.

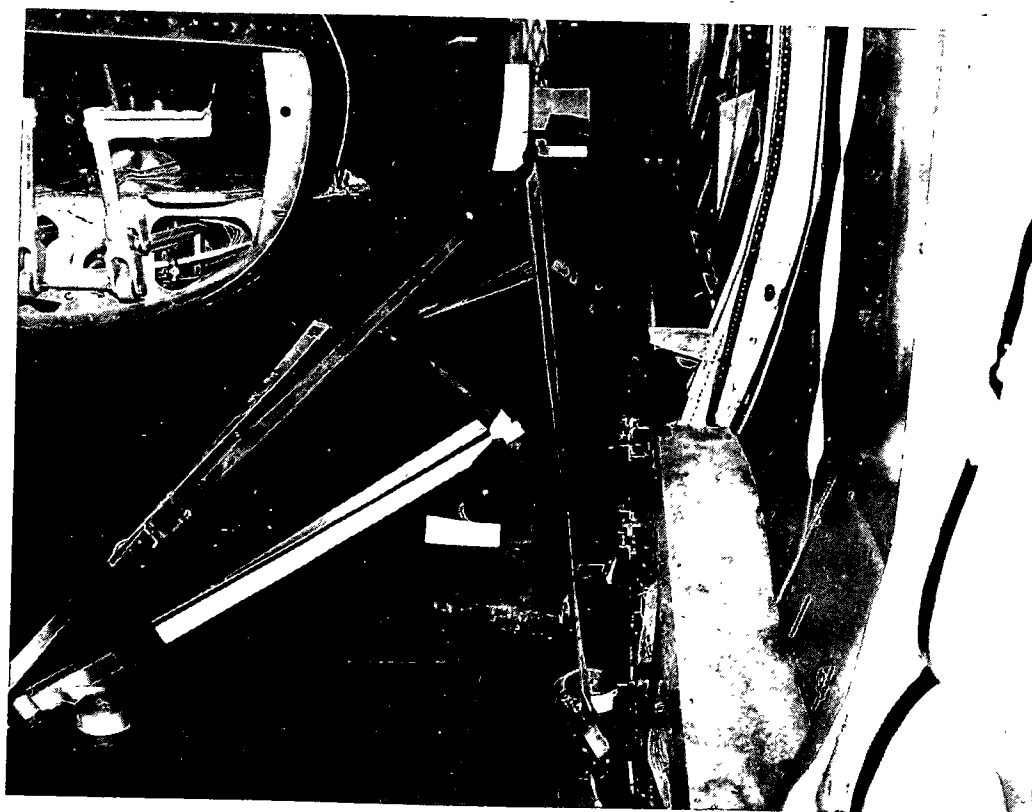


Figure 2-61. Tiedown of the UH-1 helicopter.

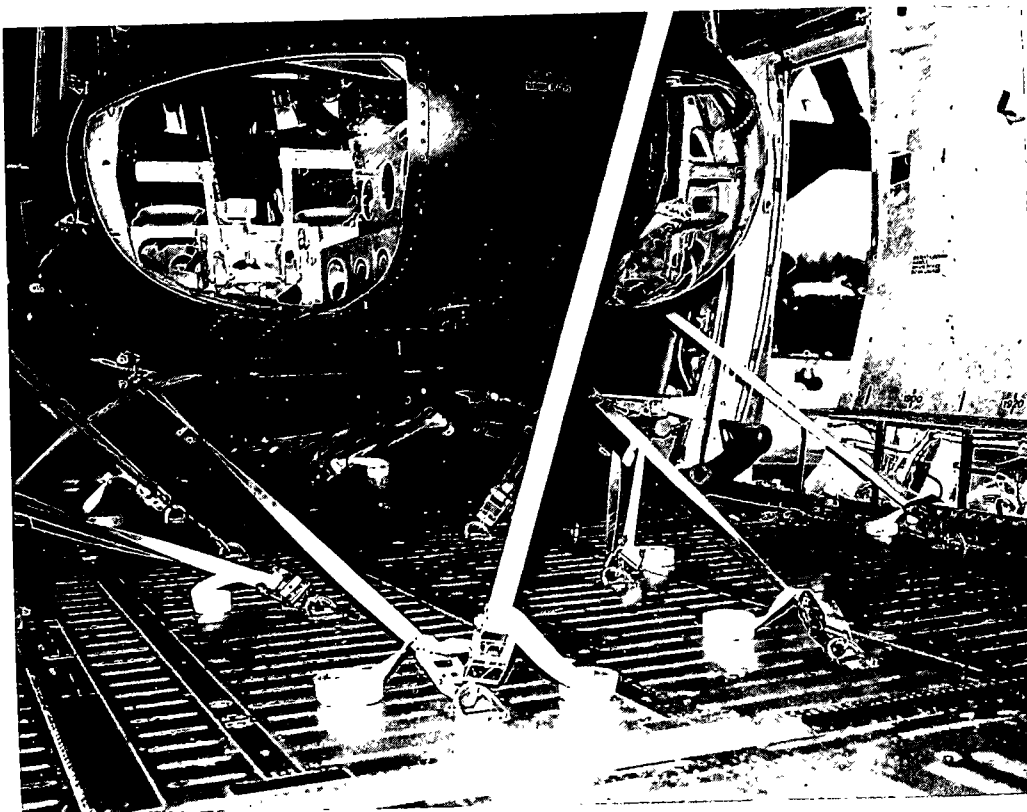


Figure 2-62. Tiedown of the UH-1 helicopter.

Table 2-10. Tiedown Data for Load 2-10

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E36	1	5,000	Front cross tube RH side
	F36	1	5,000	Front cross tube LH side
	E31 / E33	1	5,000	Rear cross tube RH side
	F31 / F33	1	5,000	Rear cross tube LH side
	E37	1	5,000	Front mooring ring RH side
	F37	1	5,000	Front mooring ring LH side
	E30	1	5,000	Rear mooring ring RH side
	F30	1	5,000	Rear mooring ring LH side
	E32 / F32	2	5,000	Through cargo compartment
	E33 / F33	2	5,000	Through cargo compartment
	E35 / F35	2	5,000	Through cargo compartment
	D36 / G36	2	5,000	Through cargo compartment
	E37 / G37	2	5,000	Around front rotor blade
	E26 / G26	2	5,000	Around rear rotor blade
	E25 / F25	1	5,000	Around tail skid
2	B36	1	5,000	Front cross tube RH side
	C36	1	5,000	Front cross tube LH side
	B31 / B33	1	5,000	Rear cross tube RH side
	C31 / C33	1	5,000	Rear cross tube LH side
	B37	1	5,000	Front mooring ring RH side
	C37	1	5,000	Front mooring ring LH side
	B30	1	5,000	Rear mooring ring RH side
	C30	1	5,000	Rear mooring ring LH side
	A32 / C32	2	5,000	Through cargo compartment
	A33 / C33	2	5,000	Through cargo compartment
	A35 / C35	2	5,000	Through cargo compartment
	A36 / C36	2	5,000	Through cargo compartment
	A37 / C37	2	5,000	Around front rotor blade
	A28 / C25	2	5,000	Around rear rotor blade
	A25 / C25	1	5,000	Around tail skid

Table 2-10—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
3	C30	1	5,000	Front cross tube RH side
	E30	1	5,000	Front cross tube LH side
	C26 / 27	1	5,000	Rear cross tube RH side
	E26 / 27	1	5,000	Rear cross tube LH side
	C31	1	5,000	Front mooring ring RH side
	E31	1	5,000	Front mooring ring LH side
	C24	1	5,000	Rear mooring ring RH side
	E24	1	5,000	Rear mooring ring LH side
	B29 / F29	2	5,000	Through cargo compartment
	C29 / E29	2	5,000	Through cargo compartment
	B26 / F26	2	5,000	Through cargo compartment
	C26 / E26	2	5,000	Through cargo compartment
	C / E34	2	5,000	Around front rotor blade
	C20 / G21	2	5,000	Around rear rotor blade
	C / E28	1	5,000	Around tail skid
4	F14 / F16	1	5,000	Front cross tube RH side
	E14 / E16	1	5,000	Front cross tube LH side
	F18	1	5,000	Rear cross tube RH side
	E18	1	5,000	Rear cross tube LH side
	F13	1	5,000	Front mooring ring RH side
	E13	1	5,000	Front mooring ring LH side
	F18	1	5,000	Rear mooring for RH side
	E18	1	5,000	Rear mooring ring LH side
	E13 / F13	2	5,000	Through cargo compartment
	E14 / F14	2	5,000	Through cargo compartment
	E17 / G17	2	5,000	Through cargo compartment
	E18 / G18	2	5,000	Through cargo compartment
	D11 / G11	2	5,000	Around front rotor blade
	D23 / G24	2	5,000	Around rear rotor blade
	E25 / F25	1	5,000	Around tail skid
5	B14 / B16	1	5,000	Front cross tube LH side
	C14 / C16	1	5,000	Front cross tube RH side
	B18	1	5,000	Rear cross tube LH side
	C18	1	5,000	Rear cross tube RH side
	B13	1	5,000	Front mooring ring LH side
	C13	1	5,000	Front mooring ring RH side
	B18	1	5,000	Rear mooring ring LH side
	C18	1	5,000	Rear mooring ring RH side
	B13 / C13	2	5,000	Through cargo compartment
	B14 / C14	2	5,000	Through cargo compartment
	A17 / C17	2	5,000	Through cargo compartment
	A18 / C18	2	5,000	Through cargo compartment
	Ring On Skid Tube	2	5,000	Around front rotor blade
	A24 / D23	2	5,000	Around rear rotor blade
	B25 / C25	1	5,000	Around tail skid
6	E10 / E12	1	5,000	Front cross tube RH side
	F10 / F12	1	5,000	Front cross tube LH side
	E11	1	5,000	Rear cross tube RH side
	F11	1	5,000	Rear cross tube LH side
	E13	1	5,000	Front mooring ring RH side
	F13	1	5,000	Front mooring ring LH side
	E7	1	5,000	Rear mooring ring RH side
	F7	1	5,000	Rear mooring ring LH side
	E8 / F18	2	5,000	Through cargo compartment
	E9 / F9	2	5,000	Through cargo compartment
	E11 / F11	2	5,000	Through cargo compartment
	E12 / F12	2	5,000	Through cargo compartment
	D14 / G14	2	5,000	Around front rotor blade
	D3 / F3	2	5,000	Around rear rotor blade
	E1 / F1	1	5,000	Around tail skid

Table 2-10—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
7	E8	1	10,000	Clevis at bumperette RH side
	F8	1	10,000	Clevis at bumperette LH side
	E10	1	10,000	Rear axle RH side
	F10	1	10,000	Rear axle LH side
	D14	1	10,000	Clevis at bumper RH side
	G14	1	10,000	Clevis at bumper LH side
8	E5	1	10,000	Axle RH side
	F5	1	10,000	Axle LH side
	D8	1	10,000	Frame RH side
	G8	1	10,000	Frame LH side
9				463L pallet
10				463L pallet
11				463L pallet
12	B37	1	10,000	Axle RH side
	C37	1	10,000	Axle LH side
	B4 Aft	Ramp 1	10,000	Frame at lunette RH side
	C4 Aft	Ramp 1	10,000	Frame at lunette LH side
13	E37	1	10,000	Clevis at bumperette RH side
	F37	1	10,000	Clevis at bumperette LH side
	E5 Aft	Ramp 1	10,000	Clevis at bumper RH side
	F5 Aft	Ramp 1	10,000	Clevis at bumper LH side

Section XI. LOAD 2-11: ONE HELICOPTER, UTILITY UH-1D; THREE HELICOPTER, UTILITY UN-1H; ONE TRUCK, UTILITY 1/4-TON M151A1; ONE TRAILER, CARGO 1/4-TON M416; ONE TRUCK, TANK FS, 2 1/2-TON W / WN M49A2C; ONE TRUCK, VANSHP 2 1/2-TON M109; ONE TRAILER, WATER 1 1/2-TON M149; ONE TRAILER, CARGO 1 1/2-TON M105A2; TWO TRUCK, CARGO 3/4-TON M37B1; TWO TRAILER, CARGO 3/4-TON M101A1; TWO 463L PALLET W / TWO 500 GALLON FUEL CELLS EACH (FIG 2-63)



Figure 2-63. Vehicle and helicopter lineup for load 2-11.

2-81. Airplane Loading Configuration

Airplane forward kneeled and both ramps in drive-in mode.

2-82. Preparing the Items

Prepare the vehicles in accordance with instructions in paragraph 1-6. Prepare the UH-1 helicopters in accordance with procedures in paragraph 2-66, load 2-9.

2-83. Materiel

See paragraph 2-75, load 2-10, for materiel requirements. Adjust requirements for number of helicopters in the load.

2-84. Personnel and Duties

a. See paragraph 2-76, load 2-10, for duties of personnel loading helicopters.

b. Eight men load all vehicles into the airplane in 20 minutes. One man drives the vehicle and one man signals directions during loading.

2-85. Loading Instructions

a. See paragraph 2-77, load 2-10, for helicopter loading instructions.

b. Drive the vehicles over the forward ramp as shown in figure 2-64 and position each vehicle at airplane station prescribed in tiedown diagram (fig 2-65).

c. Load the two 463L pallets on the forward ramp.

2-86. Tiedown (See Caution in Paragraph 1-9 c)

a. Materiel.

(1) Minimum of 84 CGU-1B tiedown devices are required for tiedown of the helicopters.

(2) Eight pieces of 1/2- by 12- by 30-inch felt sheeting, used under the tiedown straps where they are wrapped around the rotor blades.

(3) Sixteen pieces of 1/2- by 12- by 18-inch felt sheeting, used under the tiedown straps at the end of the tiedown beams on the helicopters.

(4) Two small pieces of shoring to be placed under the lunette of the M416 and M105 trailers.

b. *Personnel and Time.* Eight men tie down one UH-1 helicopter in 15 minutes. Eight men tie down all vehicles in 20 minutes.

c. Procedure.

(1) Position two tiedown beams across the floor of each helicopter cargo compartment as shown in figure 2-49.

(2) Tie down the helicopters and vehicles in accordance with the instructions in tiedown data table 2-11 and tiedown diagram (fig 2-65).

(3) Place one sheet of 12- by 30-inch felt under each tiedown strap where it is wrapped around a rotor blade, as shown in figure 2-52. Place one sheet of 12- by 18-inch felt under each tiedown where the strap passes over the end of a tiedown beam, as shown in figure 2-49.

2-87. Airplane Offloading Configuration

Airplane forward kneeled and forward and aft ramps in drive-off mode.

2-88. Offloading Instructions

a. Materiel.

(1) A minimum of two sets of UH-1 ground handling wheels.

(2) Three MB-1 tiedown device chains for the helicopter towing bridle.

(3) Eight pieces 2- by 12- inch by 16-foot lumber to be positioned at the forward ramp to form a ramp-toe extension when offloading the helicopters.

b. *Personnel and Time.* Eight men install the ground handling wheels and towing bridle, and offload one helicopter from the airplane in 15 minutes.

c. *Procedure.* Offloading is the reverse of loading, except the winch is used for braking the helicopter as it is manhandled down the ramp as shown in figure 2-66. A lumber ramp-toe extension is required. Remove parking shoring from the airplane as each helicopter is offloaded.

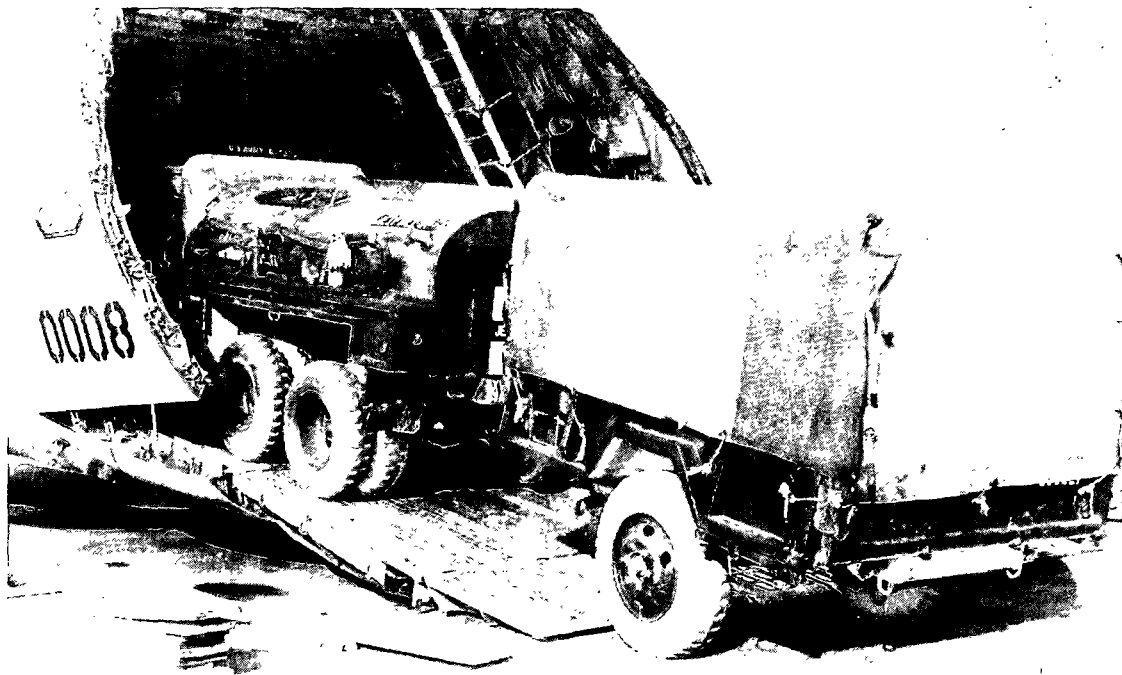
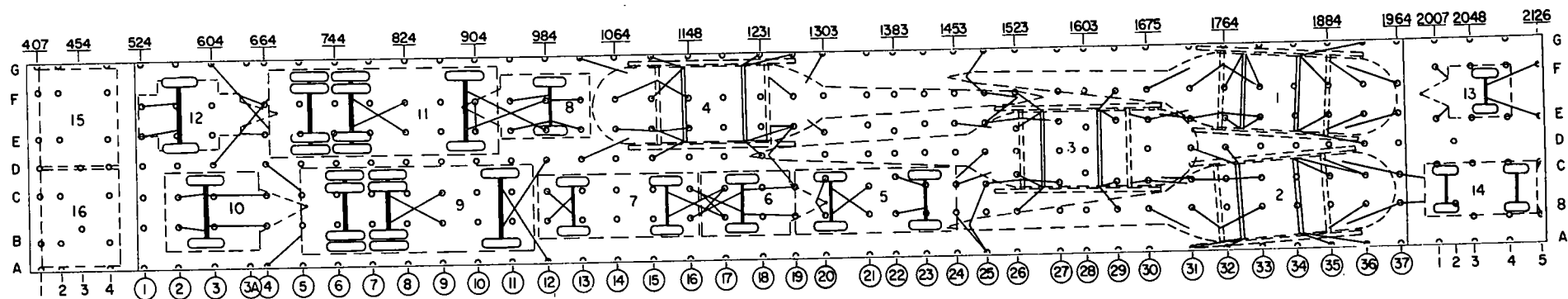


Figure 2-64. Loading M49 truck and M105 trailer over forward ramp.



C-5A CARGO LOADING

LOAD 2-11

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	STA			
1 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1440	6,500	9,066	SHORING REQUIRED
2 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1463	6,500	9,066	SHORING REQUIRED
3 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1215	6,250	9,066	SHORING REQUIRED
4 HELICOPTER, UTILITY, UH-1H	FWD	TAIL	1555	6,500	9,066	SHORING REQUIRED
5 TRUCK, CARGO, 3/4-TON, M37B1, WW	AFT	FRONT	1455	5,820	825	
6 TRAILER, CARGO, 3/4-TON, M101A1	AFT	REAR	1160	1,280	519	SHORING REQUIRED
7 TRUCK, CARGO, 3/4-TON, M37B1, WW	AFT	FRONT	1160	5,820	825	
8 TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	1040	1,280	519	SHORING REQUIRED
9 TRUCK, FUEL, 2 1/2-TON, M49A2C, WW	AFT	FRONT	970	18,690	1,416	
10 TRAILER, CARGO, 1 1/2-TON, M105A2	AFT	REAR	550	2,750	781	
11 TRUCK, SHOP VAN, 2 1/2-TON, M109	AFT	FRONT	930	15,770	1,980	
12 TRAILER, WATER, 1 1/2-TON, M149	AFT	REAR	520	2,410	623	SHORING REQUIRED
13 TRAILER, CARGO, 1 1/2-TON, M105A2	FWD	AFT RAMP	-	990	170	
14 TRUCK, UTILITY, 1/4-TON, M151A1	AFT	AFT RAMP	-	2,350	370	
15 PALLET 463L W/2 - 500 GAL. FUEL CELLS	-	FWD RAMP	-	680	200	
16 PALLET 463L W/2 - 500 GAL. FUEL CELLS	-	FWD RAMP	-	680	200	
TOTALS				83,870	44,672	

Figure 2-65. Tiedown diagram for load 2-11.



Figure 2-66. Offloading UH-1 helicopter over forward ramp.

Table 2-11. Tiedown data for load 2-11

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
1	E36	1	5,000	Front cross tube RH side
	F36	1	5,000	Front cross tube LH side
	E31 / E33	1	5,000	Rear cross tube RH side
	F31 / F33	1	5,000	Rear cross tube LH side
	E37	1	5,000	Front mooring ring RH side
	F37	1	5,000	Front mooring ring LH side
	E30	1	5,000	Rear mooring ring RH side
	F30	1	5,000	Rear mooring ring LH side
	E32 / F32	2	5,000	Through cargo compartment
	E33 / F33	2	5,000	Through cargo compartment
	E35 / F35	2	5,000	Through cargo compartment
	D36 / G36	2	5,000	Through cargo compartment
	E37 / G37	2	5,000	Around front rotor blade
	E26 / G26	2	5,000	Around rear rotor blade
	F25 / G25	1	5,000	Around tail skid
2	B36	1	5,000	Front cross tube RH side
	C36	1	5,000	Front cross tube LH side
	B31 / B33	1	5,000	Rear cross tube RH side
	C31 / C33	1	5,000	Rear cross tube LH side
	B37	1	5,000	Front mooring ring RH side
	C37	1	5,000	Front mooring ring LH side
	B30	1	5,000	Rear mooring ring RH side
	C30	1	5,000	Rear mooring ring LH side
	A31 / D31	2	5,000	Through cargo compartment
	A32 / D32	2	5,000	Through cargo compartment
	A35 / C35	2	5,000	Through cargo compartment
	A36 / C36	2	5,000	Through cargo compartment
	A37 / C37	2	5,000	Around front rotor blade
	A28 / C25	2	5,000	Around rear rotor blade
	A25 / C25	1	5,000	Around tail skid

Table 2-11—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
3	C30	1	5,000	Front cross tube RH side
	E30	1	5,000	Front cross tube LH side
	C25 / C27	1	5,000	Rear cross tube RH side
	E25 / E27	1	5,000	Rear cross tube LH side
	C31	1	5,000	Front mooring ring RH side
	E31	1	5,000	Front mooring ring LH side
	C24	1	5,000	Rear mooring ring RH side
	E24	1	5,000	Rear mooring ring LH side
	B29 / F29	2	5,000	Through cargo compartment
	C29 / E29	2	5,000	Through cargo compartment
	B26 / F26	2	5,000	Through cargo compartment
	C26 / E26	2	5,000	Through cargo compartment
	D33 / D34	2	5,000	Around front rotor blade
	D20 / D20	2	5,000	Around rear rotor blade
	C19 / E19	1	5,000	Around tail skid
4	F14 / F16	1	5,000	Front cross tube RH side
	E14 / E16	1	5,000	Front cross tube LH side
	F19	1	5,000	Rear cross tube RH side
	E19	1	5,000	Rear cross tube LH side
	G13	1	5,000	Front mooring ring RH side
	D13	1	5,000	Front mooring ring LH side
	F20	1	5,000	Rear mooring ring RH side
	E20	1	5,000	Rear mooring ring LH side
	E15 / F15	2	5,000	Through cargo compartment
	D15 / G15	2	5,000	Through cargo compartment
	D18 / G18	2	5,000	Through cargo compartment
	E19 / G19	2	5,000	Through cargo compartment
	D11 / G11	2	5,000	Around front rotor blade
	D23 / G24	2	5,000	Around rear rotor blade
	E25 / F25	1	5,000	Around tail skid
5	A25	1	10,000	Clevis at bumper RH side
	D25	1	10,000	Clevis at bumper LH side
	B22	1	10,000	Front axle RH side
	C22	1	10,000	Front axle LH side
	B21	1	10,000	Rear axle LH side
	C21	1	10,000	Rear axle RH side
6	B20 / C20	1	5,000	Over lunette
	B19	1	10,000	Axle RH side
	C19	1	10,000	Axle LH side
	B16	1	10,000	Axle LH side
	C16	1	10,000	Axle RH side
7	B17	1	10,000	Clevis at bumper LH side
	C17	1	10,000	Clevis at bumper RH side
	B17	1	10,000	Front axle LH side
	C17	1	10,000	Front axle RH side
	B12	1	10,000	Rear axle LH side
	C12	1	10,000	Rear axle RH side
8	E13	1	10,000	Axle LH side
	F13	1	10,000	Axle RH side
	E11	1	10,000	Axle LH side
	F11	1	10,000	Axle RH side
	E10 / F10	1	5,000	Over lunette
9	A12	2	25,000	Front axle LH side
	D12	2	25,000	Front axle RH side
	B9	1	25,000	Front rear axle LH side
	C9	1	25,000	Front rear axle RH side
	A4	1	25,000	Rear clevis RH side
	D4	1	25,000	Rear clevis LH side
10	B4	1	10,000	Axle RH side
	C4	1	10,000	Axle LH side
	B2	1	10,000	Axle RH side
	C2	1	10,000	Axle LH side
11	E12	1	25,000	Front axle LH side
	F12	1	25,000	Front axle RH side
	E8	1	25,000	Front rear axle LH side
	F8	1	25,000	Front rear axle RH side

Table 2-11—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
11	D3	2	25,000	Rear clevis LH side
	G3	2	25,000	Rear clevis RH side
12	E4	1	10,000	Front clevis RH side
	F4	1	10,000	Front clevis LH side
	E1	1	10,000	Axle RH side
	F1	1	10,000	Axle LH side
13	E1	1	10,000	Lunette LH side
	Aft Ramp			
	F1	1	10,000	Lunette RH side
	Aft Ramp			
	E5	1	10,000	Axle LH side
	Aft Ramp			
	F5	1	10,000	Axle RH side
	Aft Ramp			
14	B37	1	10,000	Rear clevis RH side
	C37	1	10,000	Rear clevis LH side
	B5	1	10,000	Front clevis RH side
	Aft Ramp			
	C5	1	10,000	Front clevis LH side
	Aft Ramp			
15	Fwd Ramp		RH SIDE	463L pallet
16	Fwd Ramp		LH SIDE	463L pallet

Section XII. LOAD 2-12: TWO ARMORED RECONNAISSANCE AIRBORNE ASSAULT VEHICLE, M551; ONE UNIVERSAL ENGINEER TRACTOR; ONE TRUCK, WRECKER, 5-TON W/WN, M543A2C; ONE TRUCK, UTILITY, 1/4-TON M151A1; ONE TRAILER, CARGO, 1/4-TON M416; ONE TRUCK, DUMP, 5-TON M51A2; THREE TRAILER, UTILITY, 2 1/2-TON M454; TWO LOADED 463L PALLETS (FIG 2-67)

NOTE

This load configuration reflects design aircraft load and may require altering for reduced ACL.



Figure 2-67. Vehicle lineup for load 2-12.

2-89. Airplane Loading Configuration

Airplane level kneeled with both ramps in drive-in mode.

2-90. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-91. Materiel

Sufficient, minimum ½-inch thick, rolling and parking shoring to lay a 24-inch wide path 120 feet long in the airplane for right-hand-side driveway. A lesser amount of shoring is required for this operation if the shoring is "leap-frogged" as the tracked vehicles are moved into the airplane. One piece of 2- by 12-inch by 10-foot shoring to place under Universal Engineer Tractor blade.

2-92. Personnel and Duties

Six men load each tracked vehicle into the airplane in 3 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring. Two men load each truck and trailer combination into the airplane in 2 minutes. One man drives the truck and one man signals directions during loading.

2-93. Loading Instructions

a. Position shoring on right-hand-side driveway from aft ramp toes into the cargo compartment.

b. Position the first M454 trailer (item 2) with the M543 truck wrecker prior to loading the rest of the vehicles.

c. Drive each vehicle into the cargo compartment over the aft ramp and park with each vehicle at station prescribed in the tiedown diagram (fig 2-68).

2-94. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

b. *Procedure.* Tie down all items in accordance with the instructions in tiedown diagram (fig 2-68) and tiedown data table 2-12.

2-95. Airplane Offloading Configuration

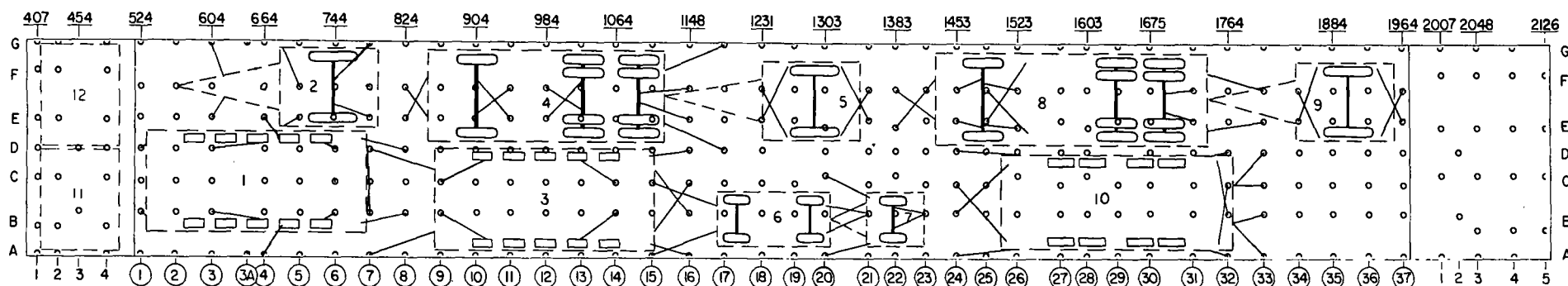
Forward ramp in drive-off mode with airplane-level kneeled.

2-96. Offloading Instructions

a. Manhandle item 2 down the forward ramp prior to offloading all other items.

b. Offload all vehicles over forward using driveway shoring for the tracked vehicles as shown in figures 2-69 through 2-71.

c. Eight men offload the entire load in 5 minutes.



C-5A CARGO LOADING

LOAD 2-12

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		BP	STA			
1 ARMORED RECON ABN ASLT VEHICLE, M551	FWD	FRONT	35	28,400	1,783	SHORING REQUIRED
2 TRAILER, UTILITY, 2 1/2-TON, M454	FWD	FRONT	565	2,200	600	
3 ARMORED RECON ABN ASLT VEHICLE, M551	FWD	FRONT	860	28,400	1,783	SHORING REQUIRED
4 TRUCK, DUMP, 5-TON, 6x6, M51A2	FWD	FRONT	850	15,240	1,678	
5 TRAILER, UTILITY, 2 1/2-TON, M454	FWD	AFT	1,345	2,200	600	
6 TRUCK, UTILITY, 1/4-TON, 4x4, M551A1	FWD	FRONT	1,180	2,350	370	
7 TRAILER, UTILITY, CARGO, 1/4-TON, M416	FWD	AFT	1,415	900	170	
8 TRUCK, WRECKER, 5-TON, W/W M543	FWD	FRONT	1,430	34,280	2,256	
9 TRAILER, UTILITY, 2 1/2-TON, M454	FWD	AFT	1,943	2,200	600	
10 UNIVERSAL ENGINEER TRACTOR	FWD	FRONT	1,500	35,500	1,891	SHORING REQUIRED
11 PALLET, 463L	-	FWD RAMP	-	7,500	350	
12 PALLET, 463L	-	FWD RAMP	-	7,500	350	
TOTALS				166,380	13,031	

Figure 2-68. Tiedown diagram for load 2-12.

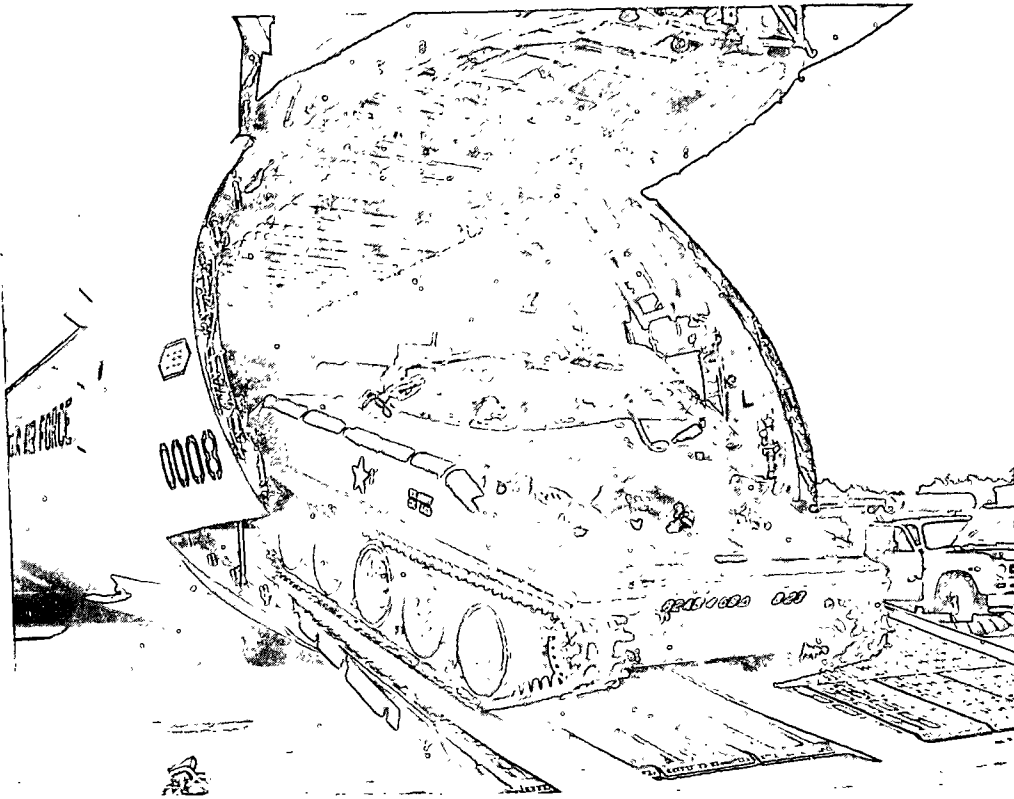


Figure 2-69. Offloading the M551 ARAAV over the forward ramp.

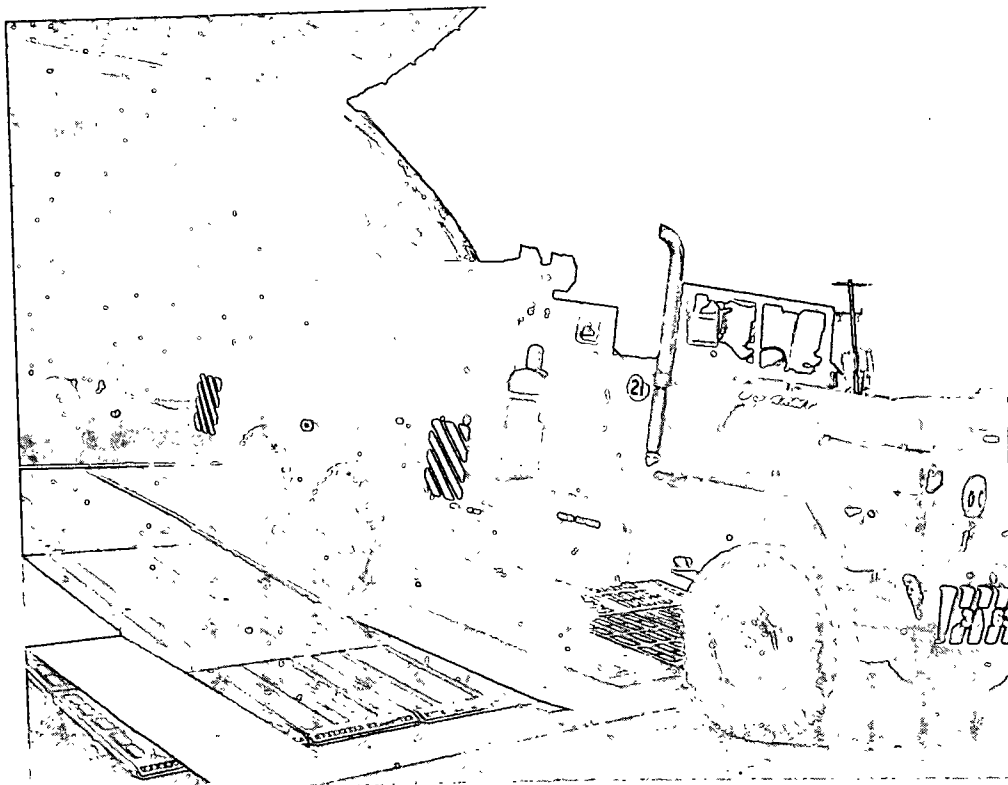


Figure 2-70. Offloading the M543 truck and M454 trailer over the forward ramp.

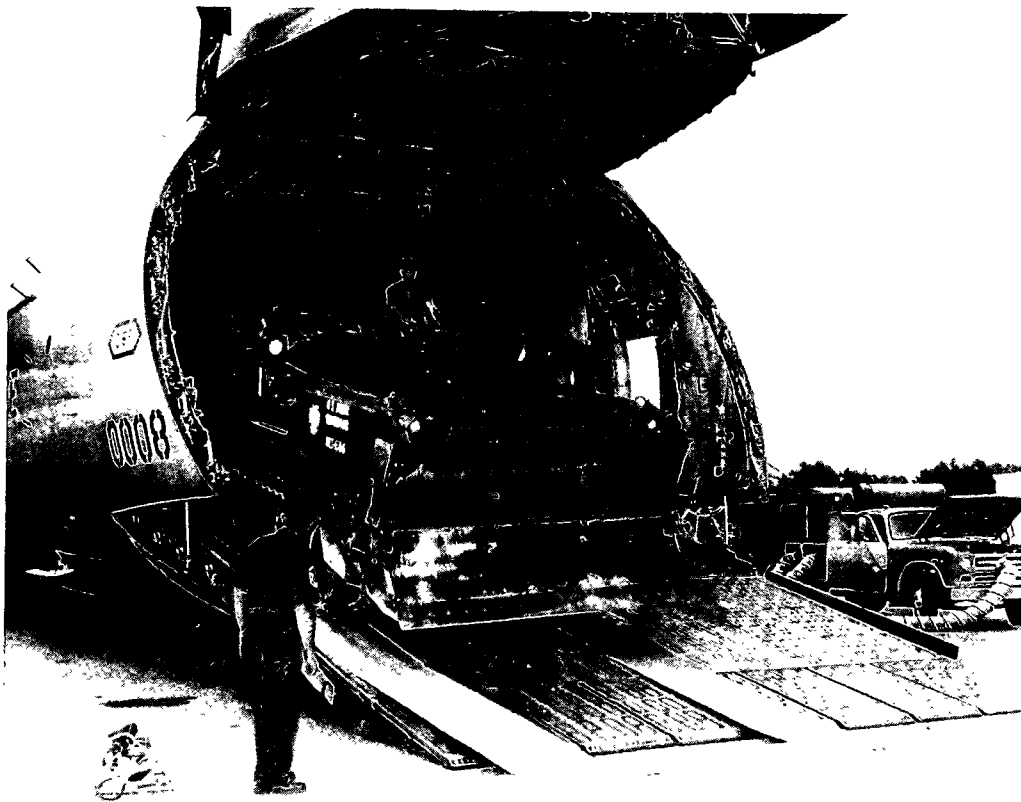


Figure 2-71. Offloading the universal engineer tractor over the forward ramp.

Table 2-12. Tiedown Data for Load 2-12

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	B1	1	25,000	Front shackle LH side
	D1	1	25,000	Front shackle RH side
	A4	1	25,000	Fourth wheel axle LH side
	E4	1	25,000	Front wheel axle
	B3	1	25,000	Third wheel axle LH side
	D3	1	25,000	Third wheel axle RH side
	B6	1	25,000	Fifth wheel axle LH side
	D6	1	25,000	Fifth wheel axle RH side
	B7	1	25,000	Rear shackle RH side
	C7	1	25,000	Rear shackle LH side
	B8	1	25,000	Lifting eye LH side
	D8	1	25,000	Lifting eye RH side
2	E5	1	10,000	Frame RH side
	F5	1	10,000	Frame LH side
	E7	1	10,000	Axle LH side
	G7	1	10,000	Axle RH side
	E3	1	10,000	Lunette LH side
	G3	1	10,000	Lunette RH side
3	A7	1	25,000	Front shackle LH side
	D7	1	25,000	Front shackle RH side
	B9	1	25,000	First wheel axle LH side
	C9	1	25,000	First wheel axle RH side
	B14	1	25,000	Fourth wheel axle LH side
	C14	1	25,000	Fourth wheel axle RH side
	E16	1	25,000	Rear clevis RH side
	C16	1	25,000	Rear clevis LH side
	A16	1	25,000	Lifting eye LH side
	D16	1	25,000	Lifting eye RH side

Table 2-12—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
4	E8	1	25,000	Clevis at bumper RH side
	F8	1	25,000	Clevis at bumper LH side
	E11	1	25,000	Front axle RH side
	F11	1	25,000	Front axle LH side
	E12	1	25,000	Front rear axle RH side
	F12	1	25,000	Front rear axle LH side
	E16	1	25,000	Rear axle LH side
	F16	1	25,000	Rear axle RH side
	D17	1	25,000	Rear shackle LH side
	G17	1	25,000	Rear shackle RH side
5	E18	1	10,000	Frame RH side
	F18	1	10,000	Frame LH side
	E21	1	10,000	Frame RH side
	F21	1	10,000	Frame LH side
6	A15	1	10,000	Clevis at bumper LH side
	C15	1	10,000	Clevis at bumper RH side
	B21	1	10,000	Rear frame LH side
	B21	1	10,000	Rear frame RH side
7	A20	1	10,000	Front frame LH side
	C20	1	10,000	Front frame RH side
	B23	1	10,000	Axle LH side
	B23	1	10,000	Axle RH side
8	E22	1	25,000	Front bumper RH side
	F22	1	25,000	Front bumper LH side
	E24	1	25,000	Front axle LH side
	F24	1	25,000	Front axle RH side
	E25	1	25,000	Frame RH side
	F25	1	25,000	Frame LH side
	E26	1	25,000	Front axle LH side
	F26	1	25,000	Front axle RH side
	E31	1	25,000	Rear axle LH side
	F31	1	25,000	Rear axle RH side
	E33	1	25,000	Rear clevis LH side
	F33	1	25,000	Rear clevis RH side
9	E34	1	10,000	Frame RH side
	F34	1	10,000	Frame LH side
	E37	1	10,000	Frame RH side
	F37	1	10,000	Frame LH side
10	B24	1	25,000	Top lifting eye RH side
	C24	1	25,000	Top lifting eye LH side
	A24	1	25,000	Side lifting eye LH side
	D24	1	25,000	Side lifting eye RH side
	A32	1	25,000	Hole in frame LH side
	D32	1	25,000	Hole in frame RH side
	B32	1	25,000	Tiedown ring under body RH side
	C32	1	25,000	Tiedown ring under body LH side
	A33	1	25,000	Rear clevis LH side
	D33	1	25,000	Rear clevis RH side
	B33	1	25,000	Rear clevis LH side
	C33	1	25,000	Rear clevis RH side
11	Fwd	Ramp		463L pallet
12	Fwd	Ramp		463L pallet

Section XIII. LOAD 2-13: ONE CRANE, TRUCK MOUNTED 20-TON, ROUGH TERRAIN M20B; ONE TRUCK, FORKLIFT, GD, ROUGH TERRAIN, 6,000 POUNDS (FIG 2-72)



Figure 2-72. Vehicle lineup for load 2-13.

2-97. Airplane Loading Configuration

Airplane forward kneeled with forward ramp in drive-in mode.

2-98. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-99. Materiel

One piece of ½-inch plywood shoring 48- by 48-inch to be positioned under forks of forklift. Four pieces 2-inch by 1- by 16-foot lumber as parking shoring for the crane.

2-100. Personnel and Duties

Four men load each vehicle into the airplane in 5 minutes. One man drives the vehicle, two men act as guides and position shoring, and the fourth man signals directions during loading and assist in positioning shoring.

2-101. Loading Instructions

- a. Drive the forklift into the cargo compartment

as shown in figure 2-73 and park with the front of the vehicle at station 1925. Position shoring under forks.

- b. Back the crane into the cargo compartment as shown in figure 2-74 and park with front of vehicle at station 1170.

2-102. Tiedown (See Caution in Paragraph 1-9 c)

- a. *Personnel and Time.* Eight men tie down the load in 20 minutes.

- b. *Procedure.* Tie down the items in accordance with the instructions in tiedown diagram (fig 2-75), tiedown data table 2-13 and figures 2-76 through 2-79.

2-103. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane forward kneeled.

2-104. Offloading Instructions

- a. Offload the vehicles over forward ramp.
- b. Four men offload the load in 5 minutes.

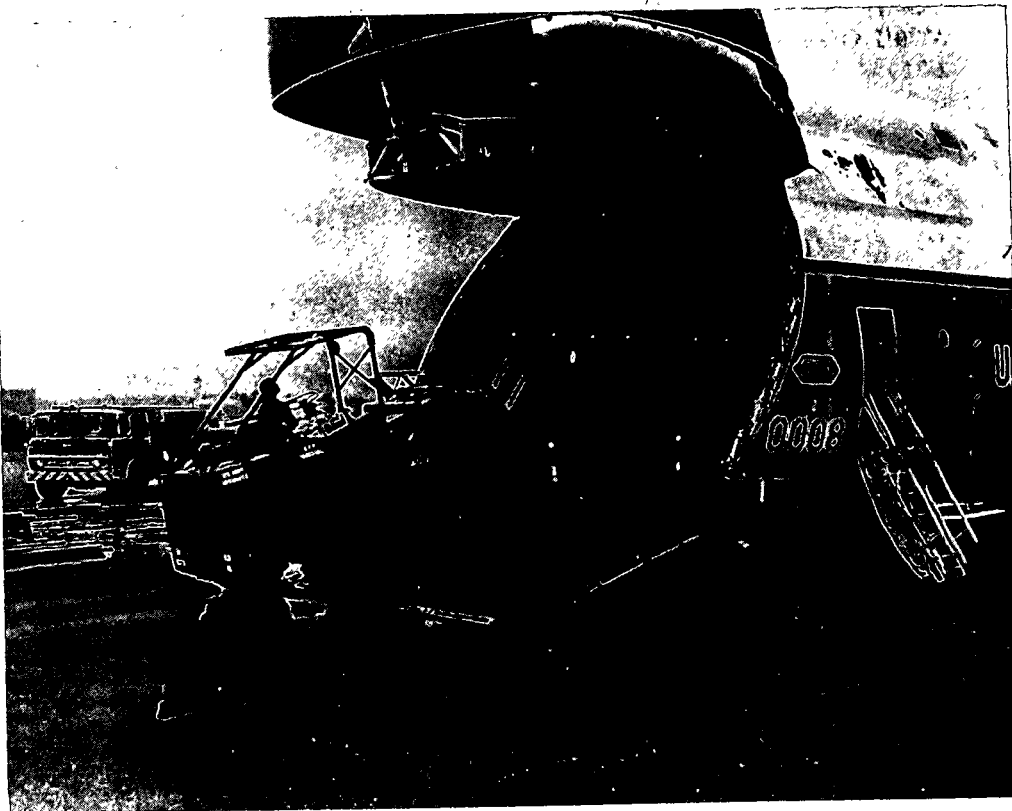


Figure 2-73. Loading the 6,000-pound rough terrain forklift over the forward ramp.

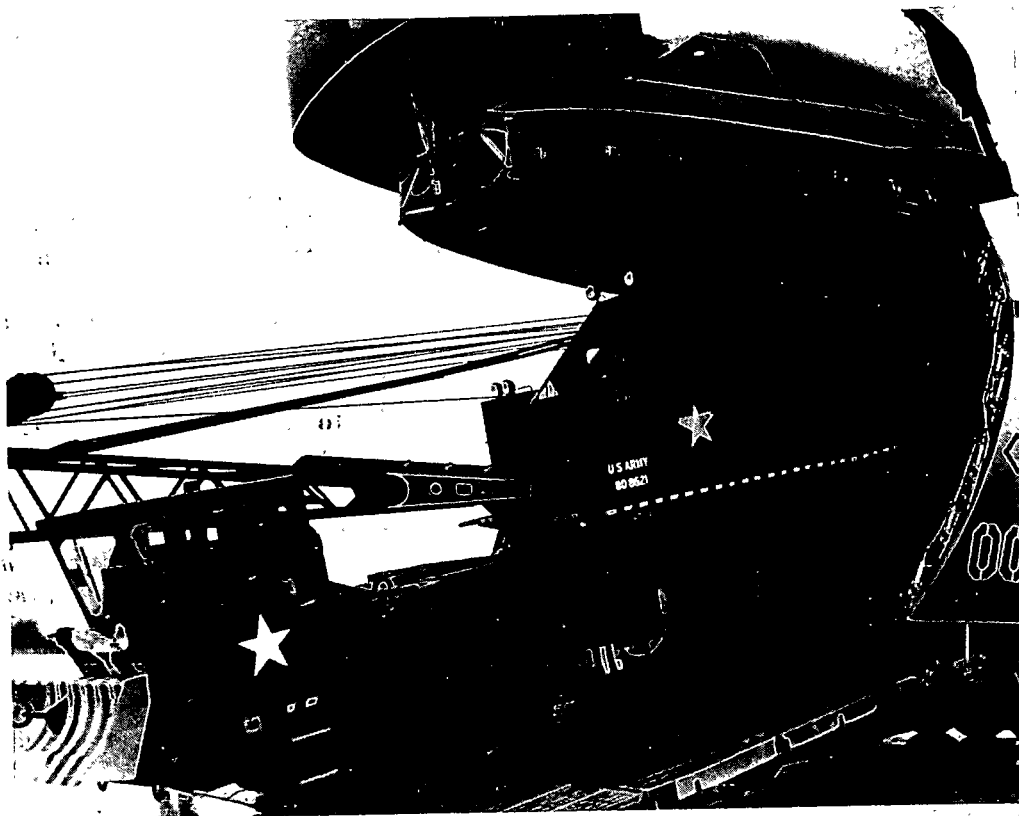
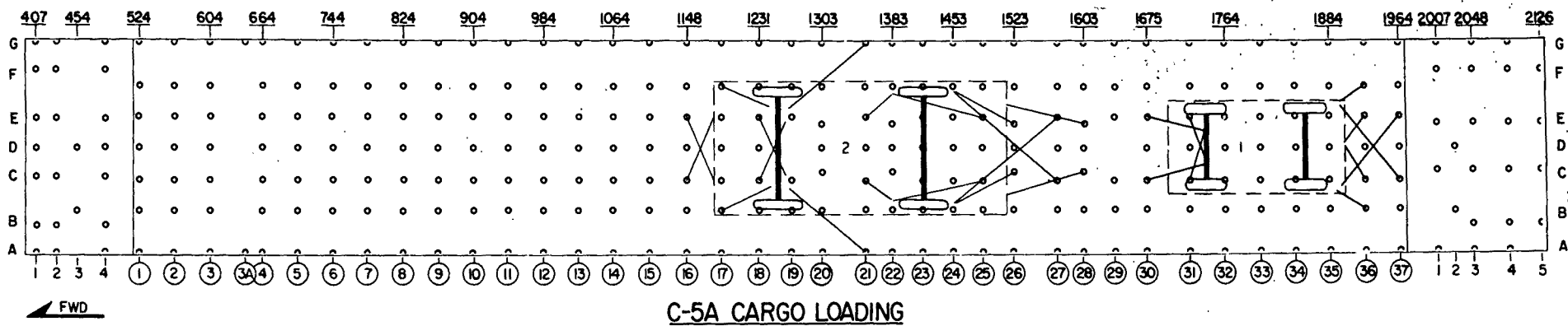


Figure 2-74. Loading the M20B crane over the forward ramp.



LOAD 2-13

DESCRIPTION	VEHICLE FACING	LOCATION OF RP RP	STA	WEIGHT	CUBE	REMARKS
1 CRANE, TRUCK, MTD, 20-TON, ROUGH TERRAIN	FWD	FRONT	1,170	61,070	3,745	SHORING REQUIRED
2 TRUCK, FORKLIFT, CD, ROUGH TERRAIN, 6,000M	AFT	FRONT	1,925	23,000	1,758	SHORING REQUIRED
TOTALS				84,070	5,503	

Figure 2-75. Tiedown diagram for load 2-13.

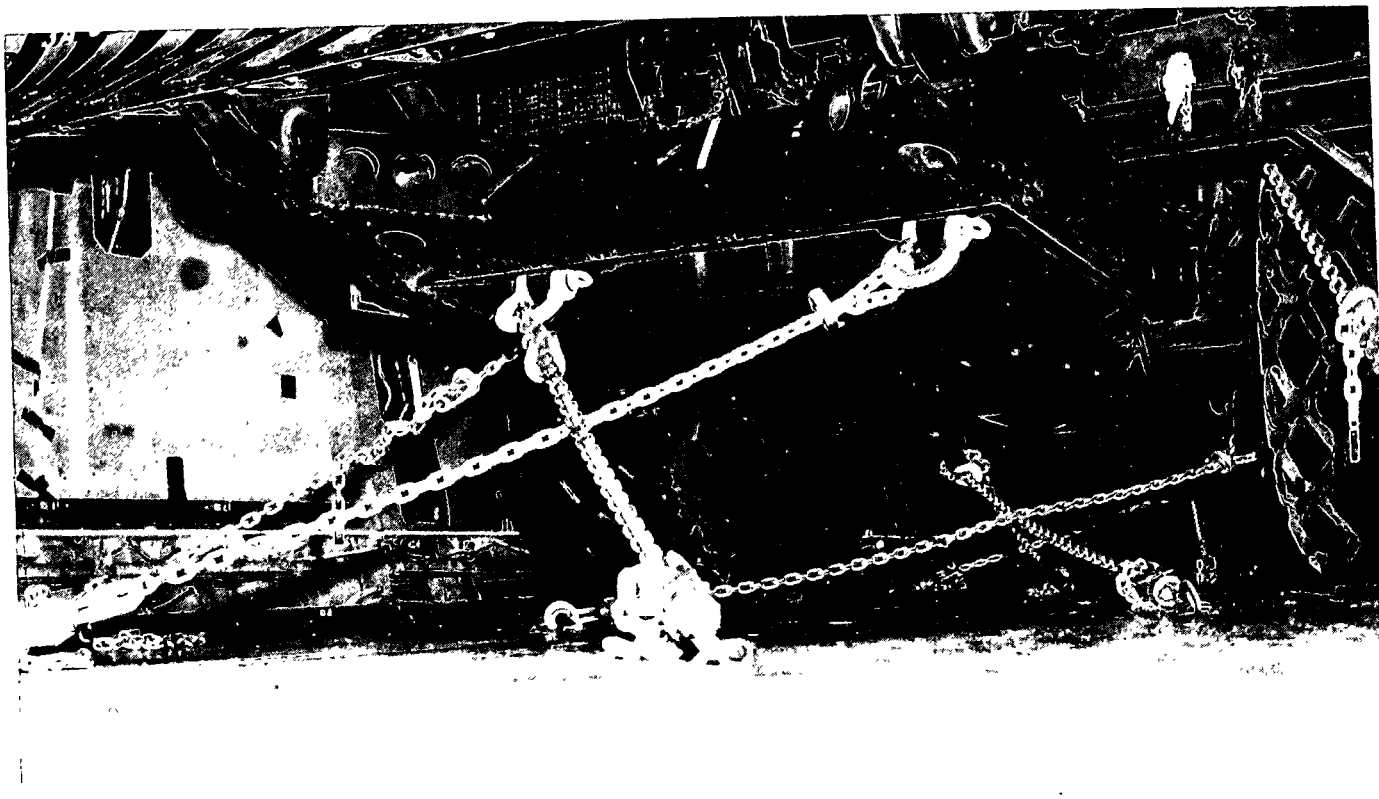


Figure 2-76. Tiedown for front of M20B crane.

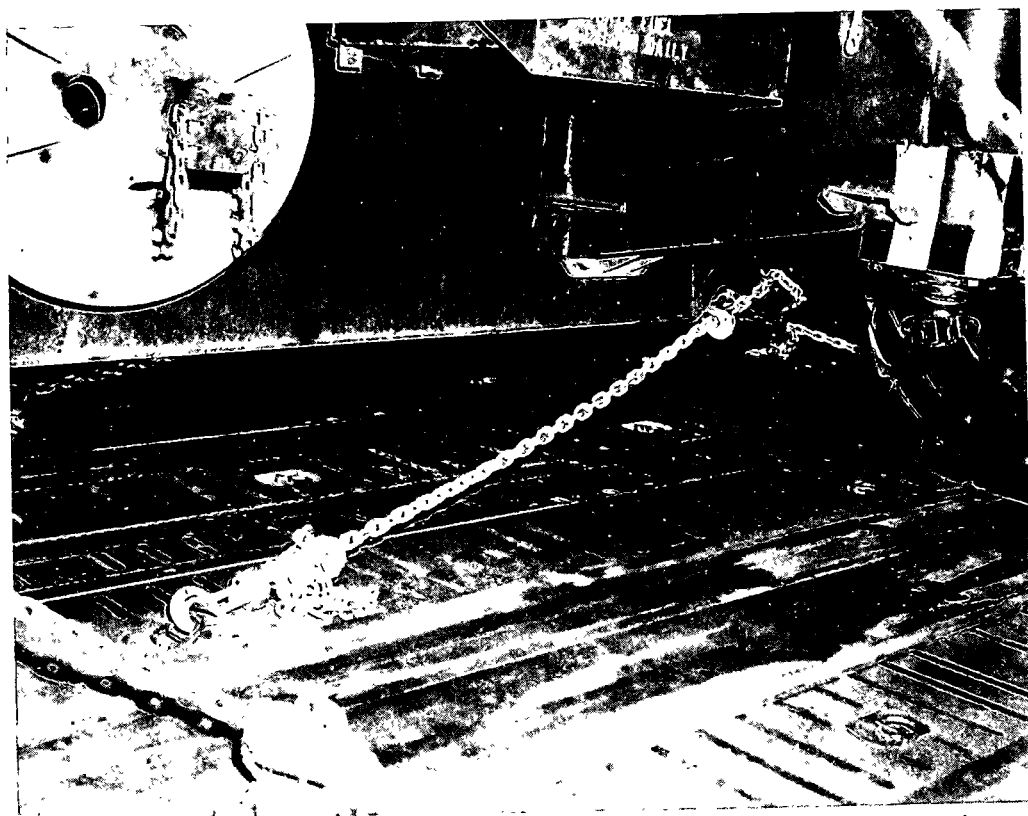


Figure 2-77. Tiedown for right side of M20B crane.

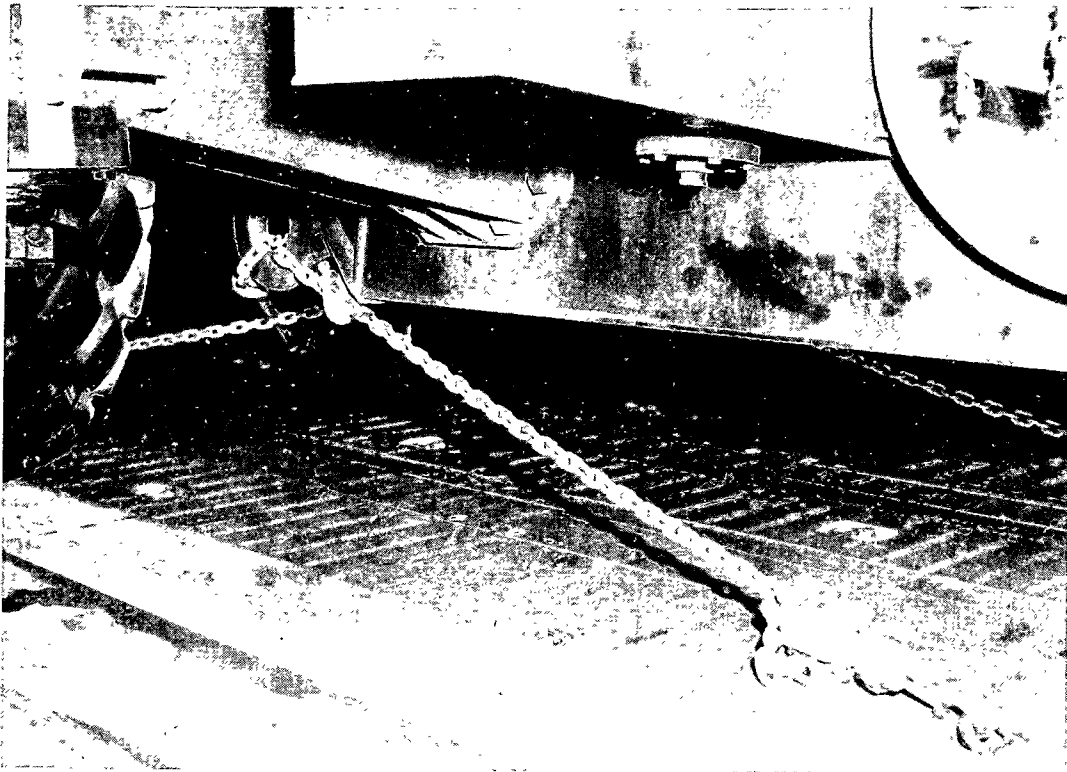


Figure 2-78. Tiedown for left side of M20B crane.



Figure 2-79. Tiedown for left side of M20B crane.

Table 2-13. Tiedown Data for Load 2-13

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	C37	2	25,000	Lifting eye RH side
	E37	2	25,000	Lifting eye LH side
	B36	1	25,000	Tiedown eye LH side
	F36	1	25,000	Tiedown eye RH side
	C36	1	10,000	Pintle hook
	E36	1	10,000	Pintle hook
	C31	1	25,000	Front axle RH side
	E31	1	25,000	Front axle LH side
	C30	1	25,000	Front axle LH side
	E30	1	25,000	Front axle RH side
2	C28	1	25,000	Rear clevis LH side
	E28	1	25,000	Rear clevis RH side
	C27	2	25,000	Ring aft of rear wheel RH side
	E27	2	25,000	Ring aft of rear wheel LH side
	C26	1	25,000	Ring aft of rear wheel LH side
	E26	1	25,000	Ring aft of rear wheel RH side
	C25	2	25,000	Ring fwd of rear wheel LH side
	E25	2	25,000	Ring fwd of rear wheel RH side
	C21	1	25,000	Ring fwd of rear wheel LH side
	E21	1	25,000	Ring fwd of rear wheel RH side
	A21	2	25,000	Boom support LH side
	G21	2	25,000	Boom support RH side
	C18	1	25,000	Ring aft of front axle RH side
	E18	1	25,000	Ring aft of front axle LH side
	B17	1	25,000	Ring above front axle LH side
	C17	1	25,000	Ring above front axle RH side
	C16	1	25,000	Front clevis RH side
	E16	1	25,000	Front clevis LH side

Section XIV. LOAD 2-14: TWO CARRIER, COMMAND / RECONNAISSANCE ARMORED M114A1; ONE CARRIER, PERSONNEL, ARMORED M113, TWO HOWITZER, MEDIUM 155MM, M109; ONE MORTAR SP, 107MM, XM106E1 (FIG 2-80)

NOTE

This load configuration reflects design aircraft load and may require altering for reduced ACL.

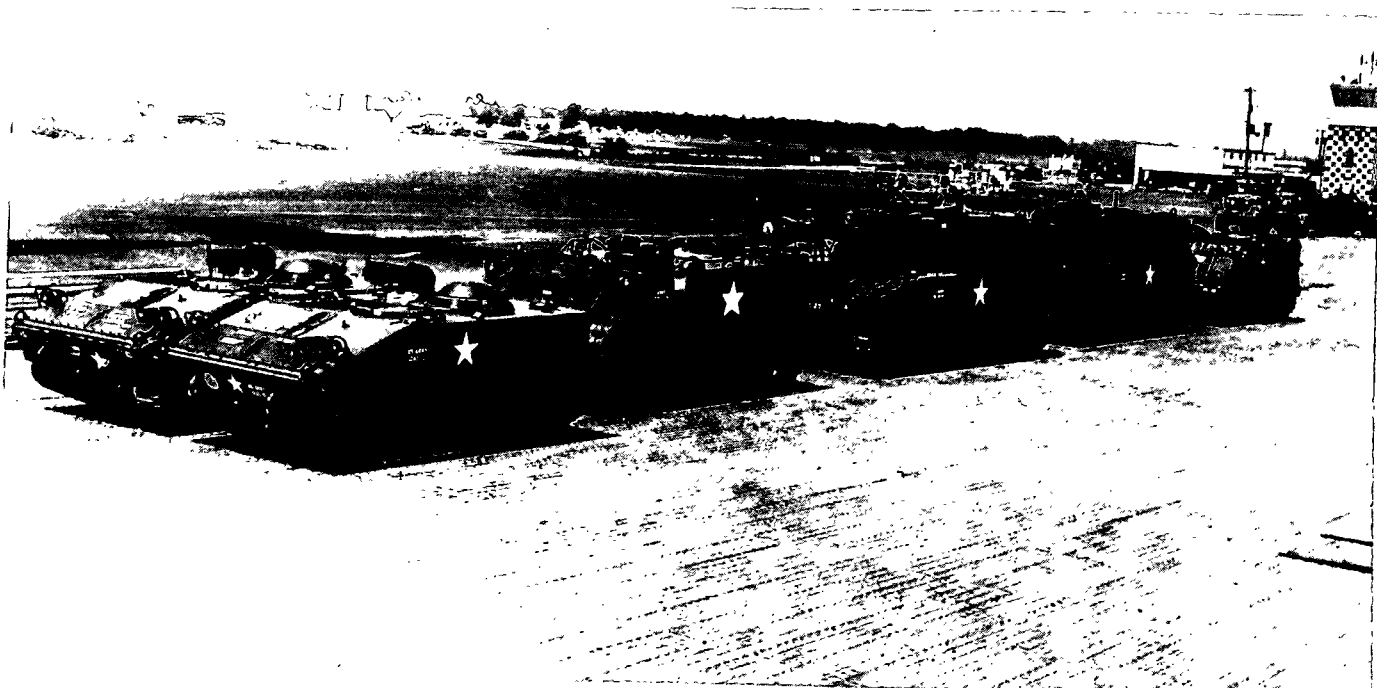


Figure 2-80. Vehicle lineup for load 2-14.

2-105. Airplane Loading Configuration

Airplane level kneeled and aft ramp in drive-in mode.

2-106. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-107. Materiel

Sufficient, minimum ½-inch thick, rolling and parking shoring to lay a 24-inch wide path 120 feet long in the airplane for each driveway. A lesser amount shoring is required for this operation if the shoring is "leap-frogged" as the tracked vehicles are moved into the airplane.

2-108. Personnel and Duties

Six men load each vehicle into the airplane in 2 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring.

2-109. Loading Instructions

Drive each vehicle into cargo compartment and park with the front of each vehicle at station numbers prescribed in tiedown diagram (fig 2-81).

2-110. Tiedown (See Caution in Paragraph 1-9 c)

a. Personnel and Time. Eight men tie down the load in 30 minutes.

b. Procedure. Tie down the items in accordance with instructions in tiedown data table 2-14 and tiedown diagram (fig 2-81).

2-111. Airplane Offloading Configuration

Airplane level kneeled with forward ramp in drive-off mode.

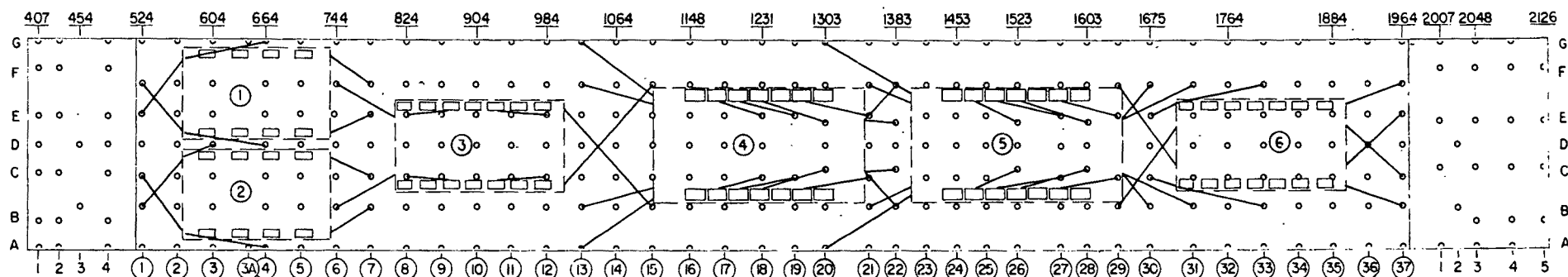
2-112. Offloading Instructions

a. Position shoring on each driveway from station 564 to forward ramp toes.

b. Offload each vehicle over the forward ramp as shown in figures 2-82 and 2-83.

c. Eight men offload the load in 3 minutes.

d. Remove all shoring from the airplane.



C-5A CARGO LOADING

LOAD 2-14

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBIC	REMARKS
		RP	STA			
1 CARRIER, COM/RECON ARMORED M114A1	FWD	FRONT	570	15,276	762	SHORING REQUIRED
2 CARRIER, COM/RECON ARMORED M114A1	FWD	FRONT	570	15,276	762	SHORING REQUIRED
3 CARRIER, PERSONNEL, FT, ARMORED M113	FWD	FRONT	810	20,030	1120	SHORING REQUIRED
4 HOWITZER, MEDIUM, SP, 155MM, M109	FWD	FRONT	1105	46,560	2208	SHORING REQUIRED
5 HOWITZER, MEDIUM, SP, 155MM, M109	FWD	FRONT	1400	46,560	2208	SHORING REQUIRED
6 MORTAR, SP, 107MM, XM106E1	FWD	FRONT	1705	20,400	1223	SHORING REQUIRED
TOTALS				164,102	8283	

Figure 2-81. Tiedown diagram for load 2-14.



Figure 2-82. Offloading the M109 howitzer over the forward ramp.

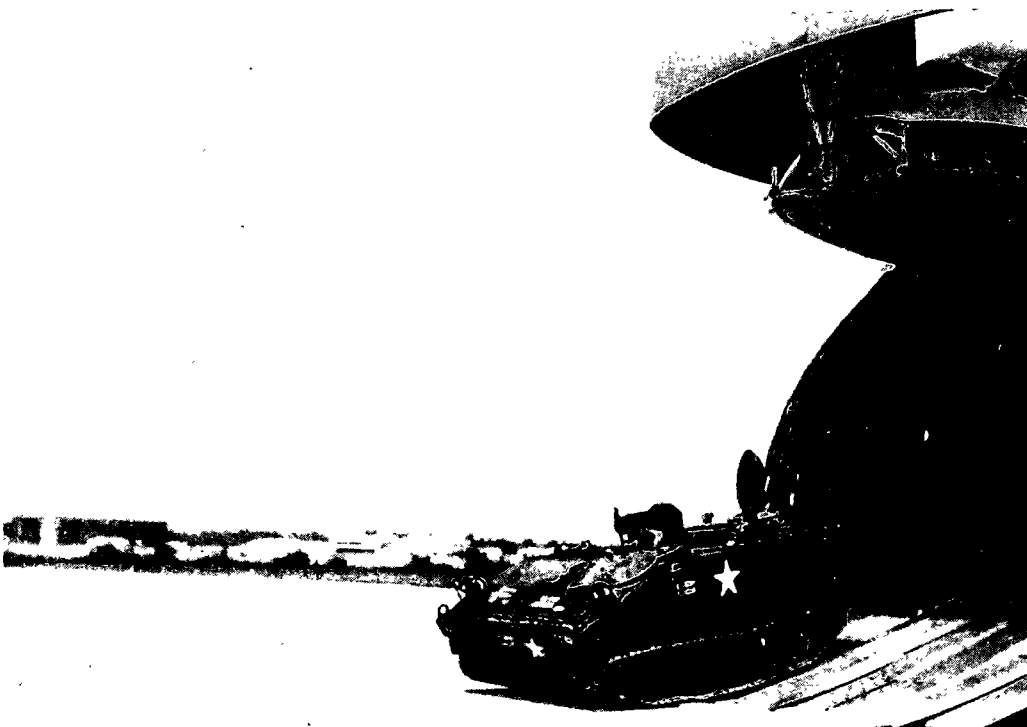


Figure 2-83. Offloading the M114 carrier over the forward ramp.

Table 2-14. Tiedown Data for Load 2-14

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E1	1	25,000	Front lifting eye RH side
	F1	1	25,000	Front lifting eye LH side
	D4	2	25,000	Front lifting eye LH side
	G4	2	25,000	Front lifting eye RH side
	E7	1	25,000	Rear lifting eye LH side
	F7	1	25,000	Rear lifting eye RH side
2	B1	1	25,000	Front lifting eye RH side
	C1	1	25,000	Front lifting eye LH side
	A4	2	25,000	Front lifting eye LH side
	D3	1	25,000	Front lifting eye RH side
	B7	1	25,000	Rear lifting eye LH side
	C7	1	25,000	Rear lifting eye RH side
3	B6	1	25,000	Clevis on towing socket LH side
	F6	1	25,000	Clevis on towing socket RH side
	C8	1	25,000	Second wheel axle LH side
	E8	1	25,000	Second wheel axle RH side
	C12	1	25,000	Fourth wheel axle LH side
	E12	1	25,000	Fourth wheel axle RH side
	B15	2	25,000	Rear lifting eye RH side
	F15	2	25,000	Rear lifting eye LH side
4	A13	2	25,000	Towing eye LH side
	G13	2	25,000	Towing eye RH side
	B13	1	25,000	Lifting eye LH side
	F13	1	25,000	Lifting eye RH side
	C18	1	25,000	Second wheel axle LH side
	E18	1	25,000	Second wheel axle RH side
	C19	1	25,000	Third wheel axle LH side
	E19	1	25,000	Third wheel axle RH side
	C20	1	25,000	Fourth wheel axle LH side
	E20	1	25,000	Fourth wheel axle RH side
	C21	1	25,000	Sixth wheel axle LH side
	E21	1	25,000	Sixth wheel axle RH side
	B22	2	25,000	Lifting eye LH side
	F22	2	25,000	Lifting eye RH side
	C22	1	25,000	Towing eye LH side
	E22	1	25,000	Towing eye RH side
5	A20	2	25,000	Towing eye LH side
	G20	2	25,000	Towing eye RH side
	B21	1	25,000	Lifting eye LH side
	F21	1	25,000	Lifting eye RH side
	C26	1	25,000	Second wheel axle LH side
	E26	1	25,000	Second wheel axle RH side
	C27	1	25,000	Third wheel axle LH side
	E27	1	25,000	Third wheel axle RH side
	C28	1	25,000	Fourth wheel axle LH side
	E28	1	25,000	Fourth wheel axle RH side
	C29	1	25,000	Sixth wheel axle LH side
	E29	1	25,000	Sixth wheel axle RH side
	B30	2	25,000	Lifting eye LH side
	F30	2	25,000	Lifting eye RH side
	B31	1	25,000	Towing eye LH side
	F31	1	25,000	Towing eye RH side
6	B29	2	25,000	Front towing eye RH side
	F29	2	25,000	Front towing eye LH side
	C30	1	25,000	Front lifting eye LH side
	E30	1	25,000	Front lifting eye RH side
	B33	2	25,000	Front lifting eye LH side
	F33	2	25,000	Front lifting eye RH side
	B37	2	25,000	Rear lifting eye LH side
	F37	2	25,000	Rear lifting eye RH side
	C37	1	25,000	Rear towing eye RH side
	E37	1	25,000	Rear towing eye LH side

Section XV. LOAD 2-15: ONE LOADER, SCOOP, 175AM; TWO TRUCK, WATER PURIFICATION 2½-TON M46; THREE TRUCK, UTILITY ¼-TON M151A1; ONE CRANE, TRUCK MOUNTED, 20-TON M20B; ONE GRADER, SCRAPER, WESTINGHOUSE 440; TWO 463L PALLETS W/ CARGO (FIG 2-84)

NOTE

This load configuration reflects design aircraft load and may require altering for reduced ACL.

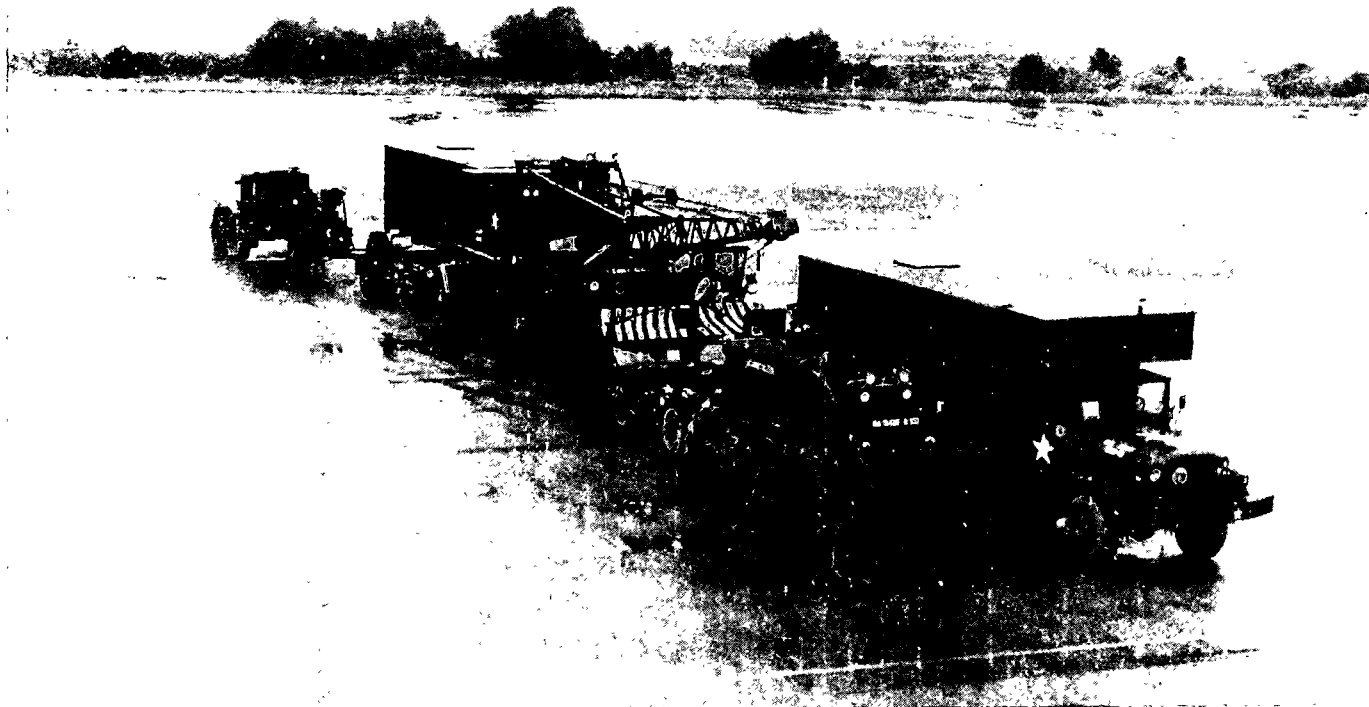


Figure 2-84. Vehicle lineup for load 2-15.

2-113. Airplane Loading Configuration

Airplane forward kneeled and forward ramp in drive-in mode.

2-114. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-115. Materiel

a. Four pieces of 2- by 12-inch by 16-foot parking shoring for the M20B crane.

b. One piece 2- by 12-inch by 10-foot shoring to be positioned under the scoop of the loader scoop.

2-116. Personnel and Duties

Sixteen men load all vehicles into the airplane in 30 minutes. One man drives the vehicle and one man signals directions during loading.

2-117. Loading Instructions

a. Drive items 1 through 4 into the cargo compartment over the forward ramp as shown in

figure 2-85 and park each vehicle at station prescribed in the tiedown diagram (fig 2-86). Position shoring under the scoop of item 1.

b. Back item 5 into the cargo compartment as shown in figure 2-87 and position shoring prior to parking at station prescribed in the tiedown diagram (fig 2-86).

c. Drive items 6 through 8 into the cargo compartment over the forward ramp and park each vehicle at station prescribed in the tiedown diagram (fig 2-86).

d. Load the two 463L pallets on the forward ramp.

2-118. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

b. *Procedure.* Tie down the items in accordance with the instructions in tiedown data table 2-15, tiedown diagram (fig 2-86), and figures 2-88 through 2-92.

2-119. Airplane Offloading Configuration

Airplane forward kneeled and forward ramp in drive-off mode.

2-120. Offloading Instructions

a. Offload the two 463L pallets from forward ramp.

b. Offload each vehicle over the forward ramp as shown in figure 2-93.

c. Sixteen men offload all vehicles in 20 minutes.

d. Remove all shoring from the airplane.

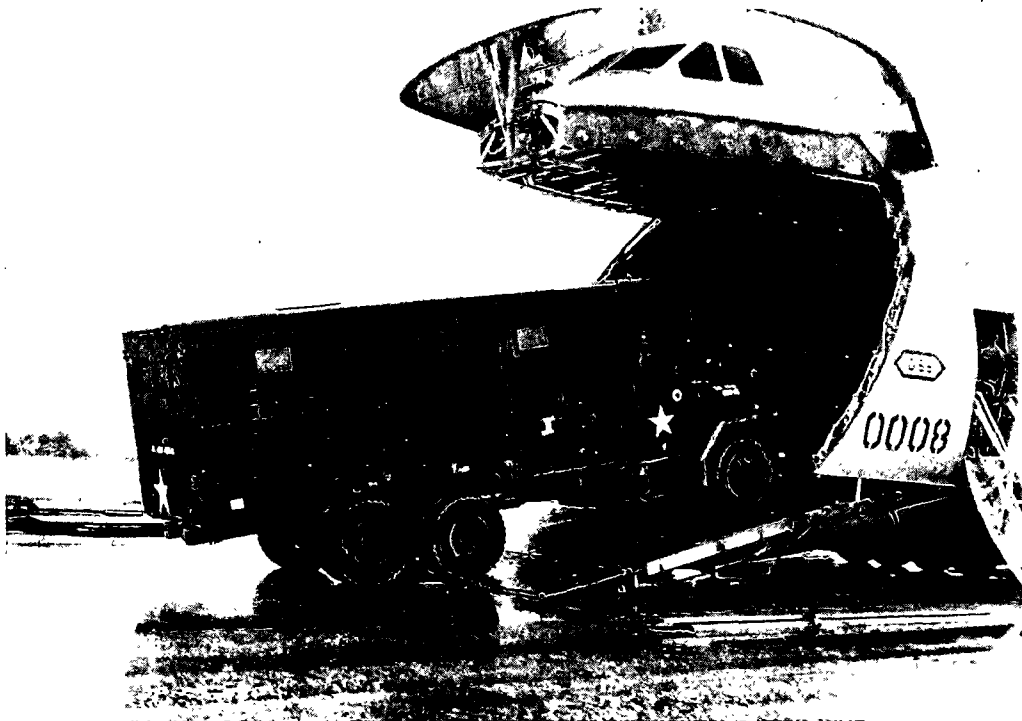
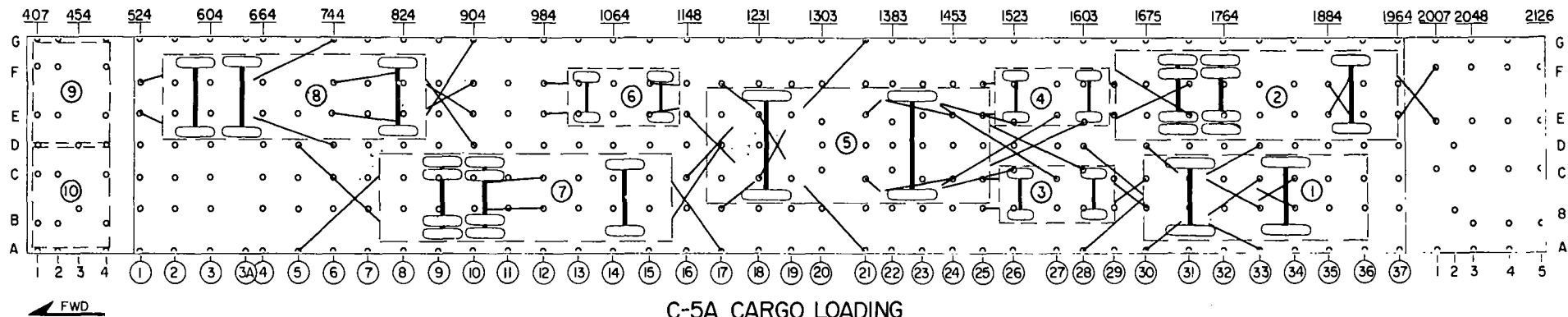


Figure 2-85. Loading the M46 truck with water purification unit over forward ramp.



C-5A CARGO LOADING

LOAD 2-15

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP RP	STA	WEIGHT	CUBE	REMARKS
1 LOADER, SCOOP, 175 A M.	AFT	FRONT	1930	29,340	1,800	SHORING REQUIRED
2 TRUCK, WATER PURIFICATION, 2 1/2- TON M46	AFT	FRONT	1965	21,520	2,249	
3 TRUCK, UTILITY, 1/4-TON M15A1	AFT	FRONT	1640	2,350	370	
4 TRUCK, UTILITY, 1/4-TON M15A1	AFT	FRONT	1635	2,350	370	
5 CRANE, TRUCK M10, 20 TON	FWD	FRONT	1170	61,070	3,745	SHORING REQUIRED
6 TRUCK, UTILITY, 1/4-TON M15A1	AFT	FRONT	1140	2,350	370	
7 TRUCK, WATER PURIFICATION, 2 1/2- TON M46	AFT	FRONT	1130	21,520	2,249	
8 GRADER, SCRAPER, WESTINGHOUSE 440	AFT	FRONT	910	26,470	1,960	
9 463L PALLET W/CARGO	FWD RAMP			8,292	350	
10 463L PALLET W/CARGO	FWD RAMP			8,293	350	
TOTALS				184,055	13,819	

Figure 2-86. Tiedown diagram for load 2-15.

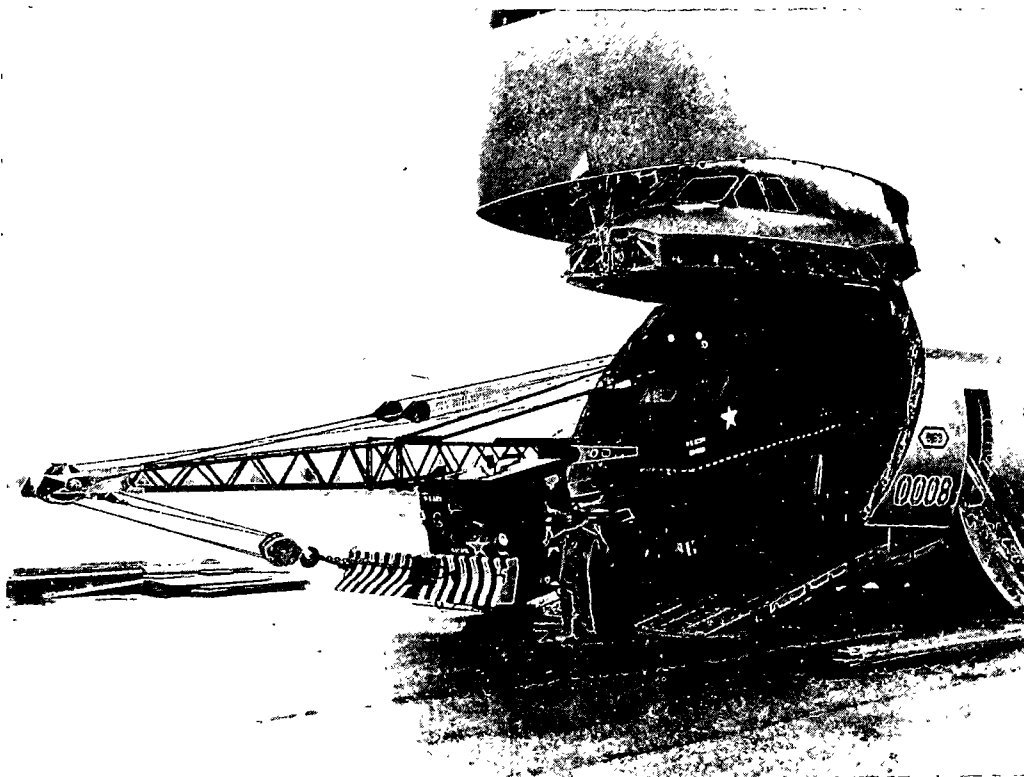


Figure 2-87. Loading the M20B crane over the forward ramp.

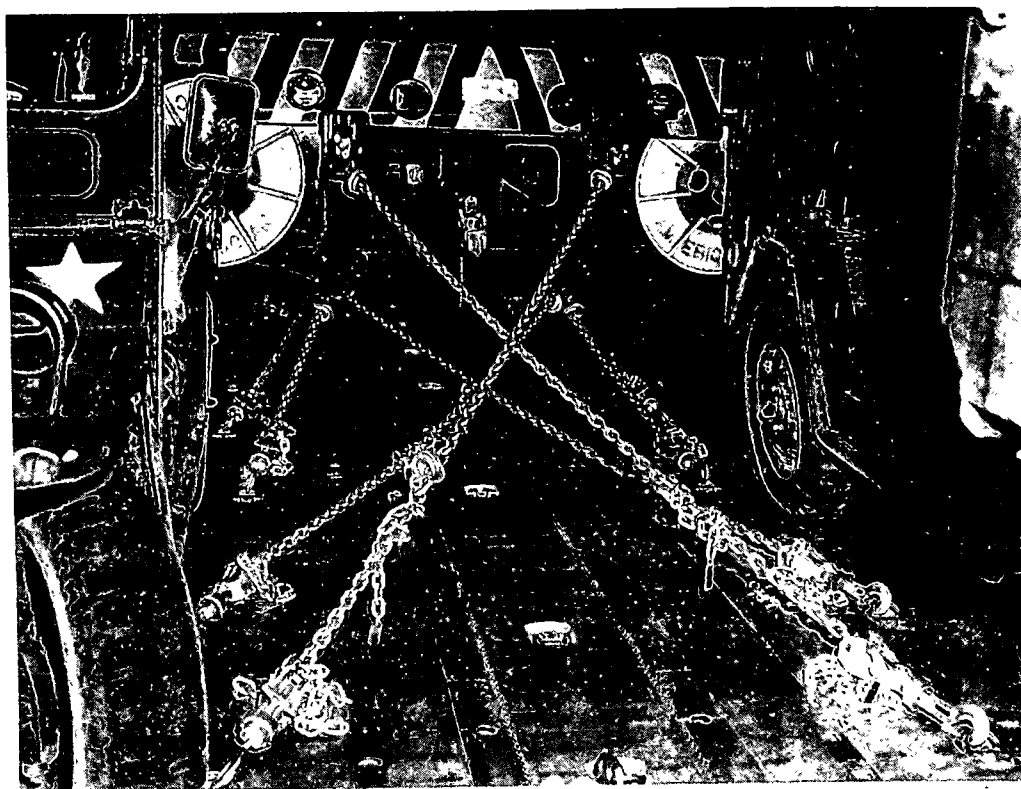


Figure 2-88. Tiedown for rear of M20B crane.

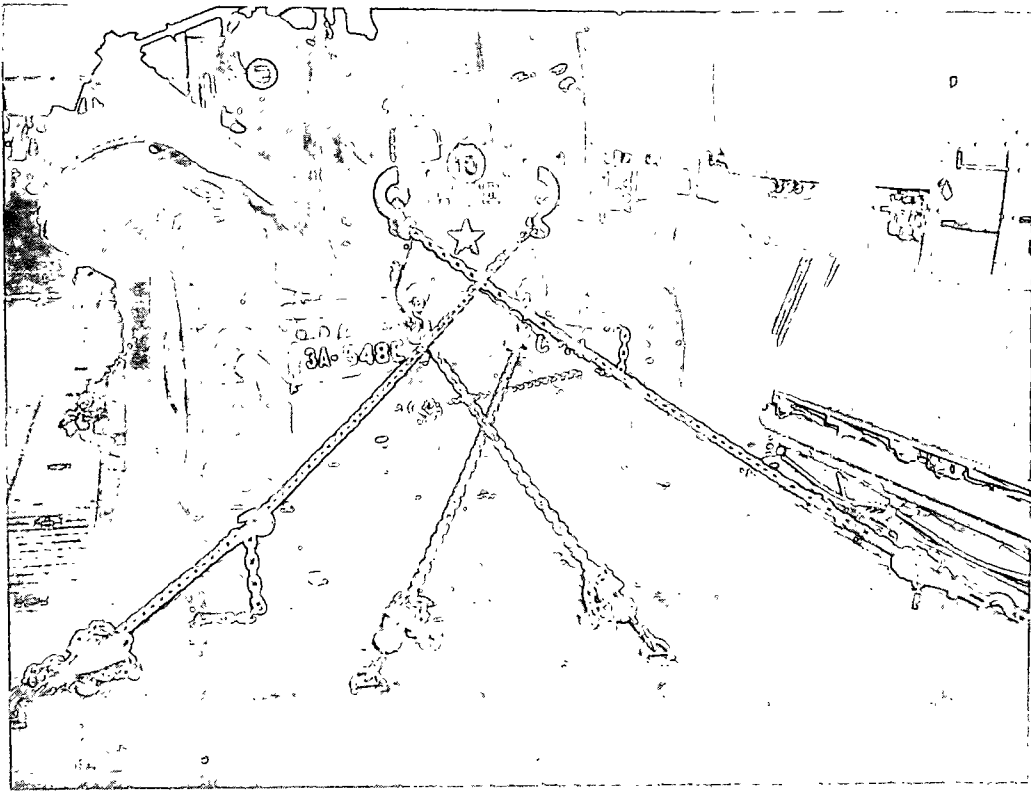


Figure 2-89. Tiedown for front of Westinghouse 440 road grader.

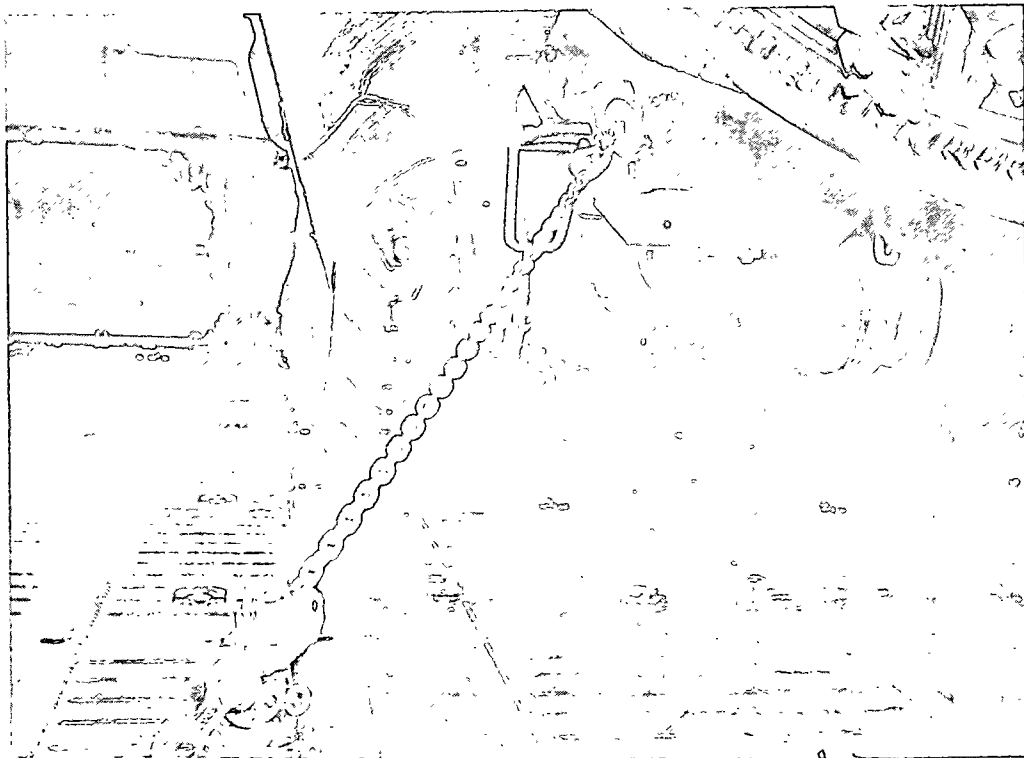


Figure 2-90. Tiedown for right side of Westinghouse 440 road grader.

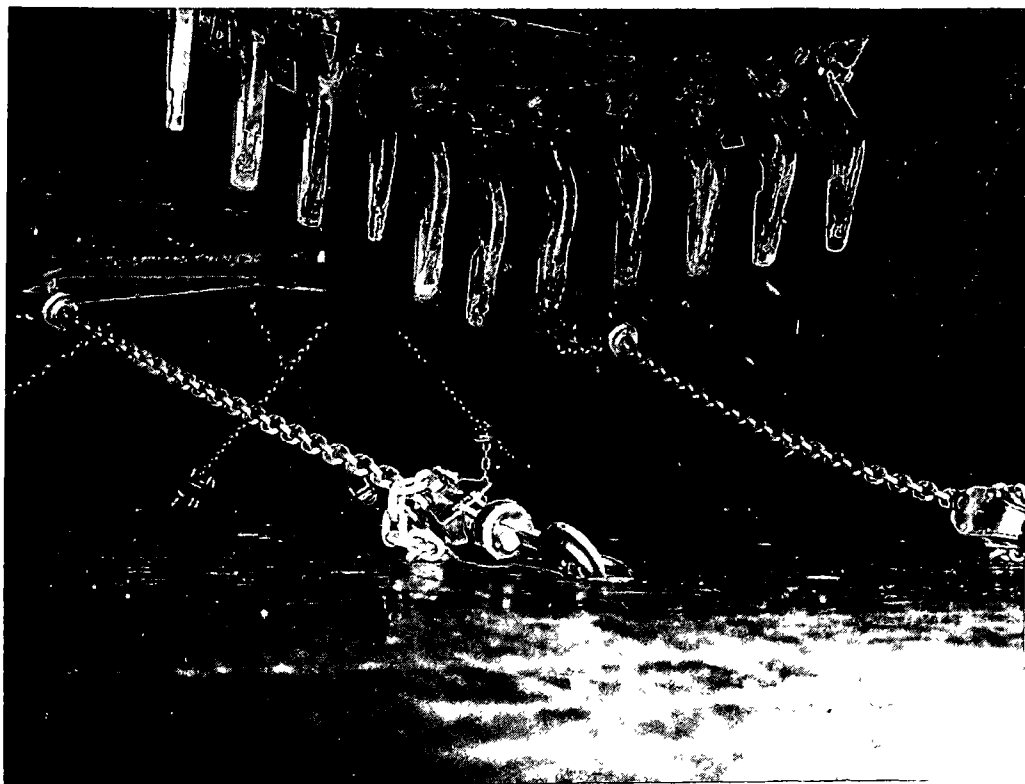


Figure 2-91. Tiedown on front axle of Westinghouse 440 road grader.



Figure 2-92. Tiedown of underside of 175AM loader scoop.



Figure 2-93. Offloading the Westinghouse 440 road grader over the forward ramp.

Table 2-15. Tiedown Data for Load 2-15

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	A28	1	25,000	Rear tow hitch
	D28	1	25,000	Rear tow hitch
	A30	1	25,000	Rear tiedown RH side
	D30	1	25,000	Rear tiedown LH side
	A33	1	25,000	Rear frame RH side
	D33	1	25,000	Rear frame LH side
	B33	1	25,000	Rear frame LH side
	C33	1	25,000	Rear frame RH side
	B34	1	25,000	Rear frame LH side
	C34	1	25,000	Rear frame RH side
2	E1	1	25,000	Clevis at bumper LH side
	F1	1	25,000	Clevis at bumper RH side
	E35	1	25,000	Front axle LH side
	F35	1	25,000	Front axle RH side
	E31	2	25,000	Rear clevis LH side
	F31	2	25,000	Rear clevis RH side
3	B30	1	10,000	Clevis at bumper LH side
	C30	1	10,000	Clevis at bumper RH side
	B25	1	10,000	Clevis at bumperette RH side
	C25	1	10,000	Clevis at bumperette LH side
4	E29	1	10,000	Clevis at bumper RH side
	F29	1	10,000	Clevis at bumper LH side
	E25	1	10,000	Clevis at bumperette RH side
	F25	1	10,000	Clevis at bumperette LH side
5	C28	2	25,000	Rear clevis RH side
	E28	2	25,000	Rear clevis LH side
	C27	2	25,000	Second tiedown ring RH side

Table 2-15—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
5	E27	2	25,000	Second tiedown ring LH side
	C26	1	25,000	Second tiedown ring LH side
	E26	1	25,000	Second tiedown ring RH side
	C24	1	25,000	First tiedown ring LH side
	E24	1	25,000	First tiedown ring RH side
	A21	2	25,000	Boom support LH side
	D21	2	25,000	Boom support RH side
	C21	1	25,000	First tiedown ring LH side
	E21	1	25,000	First tiedown ring RH side
	C18	1	25,000	Tiedown ring aft of front axle RH side
	E18	1	25,000	Tiedown ring aft of front axle LH side
	B17	2	25,000	Tiedown ring above front axle LH side
	F17	2	25,000	Tiedown ring above front axle RH side
	C16	1	25,000	Front tiedown clevis LH side
	E16	1	25,000	Front tiedown clevis RH side
6	E15	1	10,000	Clevis at bumper RH side
	F15	1	10,000	Clevis at bumper LH side
	E12	1	10,000	Clevis at bumperette RH side
	F12	1	10,000	Clevis at bumperette LH side
7	A17	1	25,000	Clevis at bumper LH side
	D17	1	25,000	Clevis at bumper RH side
	B12	1	25,000	Front rear axle RH side
	C12	1	25,000	Front rear axle LH side
	A5	2	25,000	Clevis at bumperette LH side
	D5	2	25,000	Clevis at bumperette RH side
8	D10	2	25,000	Front upper sling point LH side
	G10	2	25,000	Front upper sling point RH side
	E10	1	25,000	Front lower sling point LH side
	F10	1	25,000	Front lower sling point RH side
	E6	1	25,000	Front axle RH side
	F6	1	25,000	Front axle LH side
	D6	1	25,000	Tiedown point on frame RH side
	G6	1	25,000	Tiedown point on frame LH side
	E1	1	25,000	Rear tiedown point RH side
	F1	1	25,000	Rear tiedown point LH side
9	Fwd ramp			Loaded 463L pallet
10	Fwd ramp			Loaded 463L pallet

Section XVI. LOAD 2-16: ONE CARRIER, PERSONNEL M113; ONE CARRIER, COMMAND POST M577A1; ONE RECOVERY VEHICLE, ARMORED M578; TWO HOWITZER, MEDIUM, SP, 155MM, M109 (FIG 2-94)

NOTE

This load configuration reflects design aircraft load and may require altering for reduced ACL.

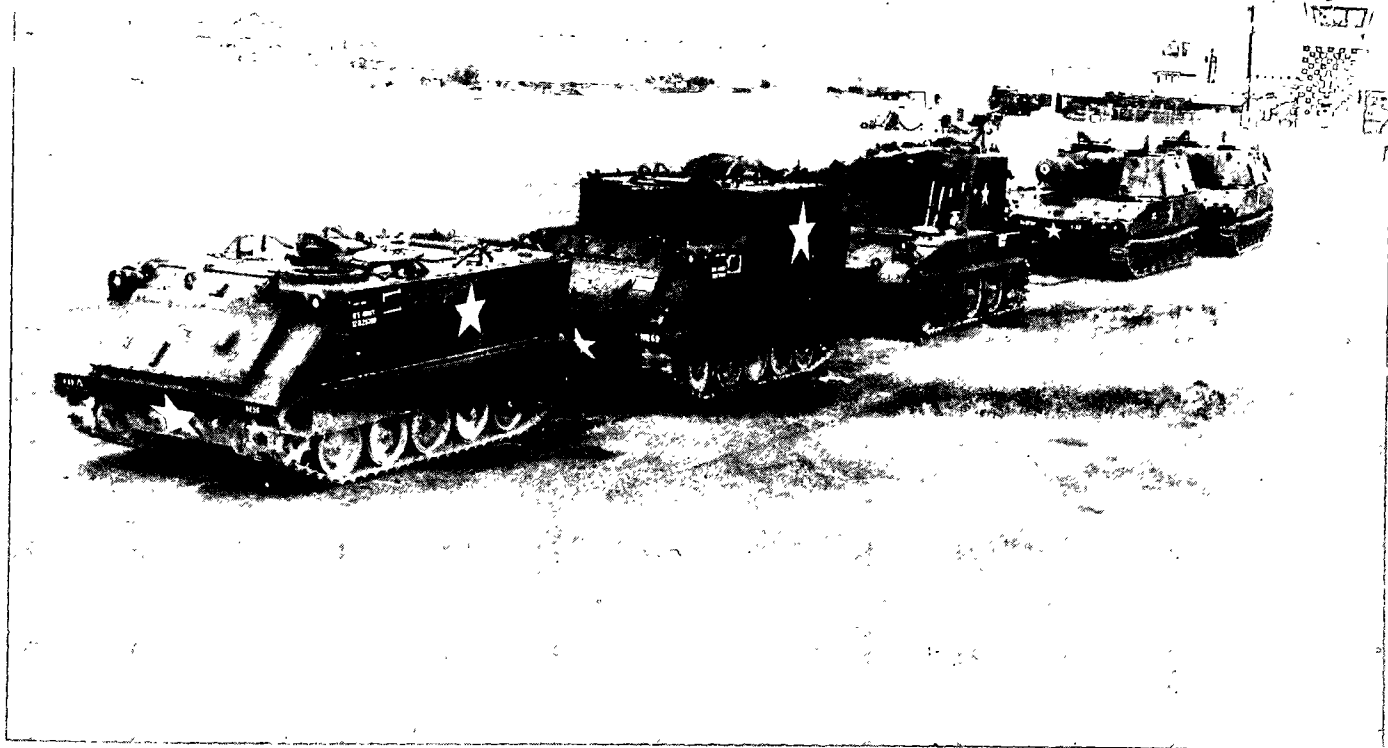


Figure 2-94. Vehicle lineup for load 2-16.

2-121. Airplane Loading Configuration

Airplane level kneeled with aft ramp in drive-in mode.

2-122. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-123. Materiel

Sufficient, minimum ½-inch thick, rolling and parking shoring to lay a 24-inch wide path 120 feet long in the airplane for a driveway. A lesser amount of shoring is required for this operation if the shoring is "leap-frogged" as the tracked vehicles are moved into the airplane.

2-124. Personnel and Duties

Six men load each tracked vehicle into the airplane in 2 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring.

2-125. Loading Instructions

a. Position driveway shoring from aft ramp toes into the cargo compartment.

b. Drive each vehicle into the cargo compartment over the aft ramp and park with each vehicle at station number prescribed in tiedown diagram (fig 2-95).

2-126. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

b. *Procedure.* Tie down all items in accordance with the instructions in tiedown diagram (fig 2-95), tiedown diagram (fig 2-95), tiedown data table 2-16, and figure 2-96.

2-127. Airplane Offloading Configuration

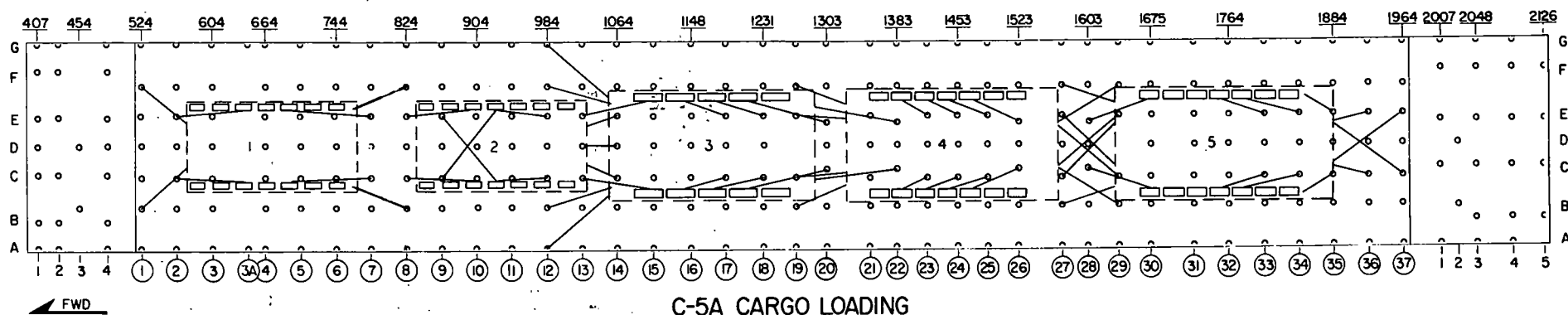
Forward ramp in drive-off mode with airplane level kneeled.

2-128. Offloading Instructions

a. Offload all vehicles over forward ramp using driveway shoring for the vehicles as shown in figures 2-97 and 2-98.

b. Remove the shoring from the airplane.

c. Eight men offload the vehicles in 5 minutes.



LOAD 2-16

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP RP STA	WEIGHT	CUBE	REMARKS
1 CARRIER, PERSONNEL, FT, ARMORED, M113	FWD	FRONT	577	20,030	1,120 SHORING REQUIRED
2 CARRIER, CP, LIGHT, FRACKED, M577	FWD	FRONT	835	21,990	1,208 SHORING REQUIRED
3 RECOVERY VEHICLE, FT, LIGHT, ARMORED, M578	FWD	FRONT	1,053	51,090	2,056 SHORING REQUIRED
4 HOWITZER, MEDIUM, SP, 155MM, M109	FWD	FRONT	1,325	46,560	2,208 SHORING REQUIRED
5 HOWITZER, MEDIUM, SP, 155MM, M109	FWD	FRONT	1,635	46,560	2,208 SHORING REQUIRED
TOTALS				182,830	8,800

Figure 2-95. Tiedown diagram for load 2-16.

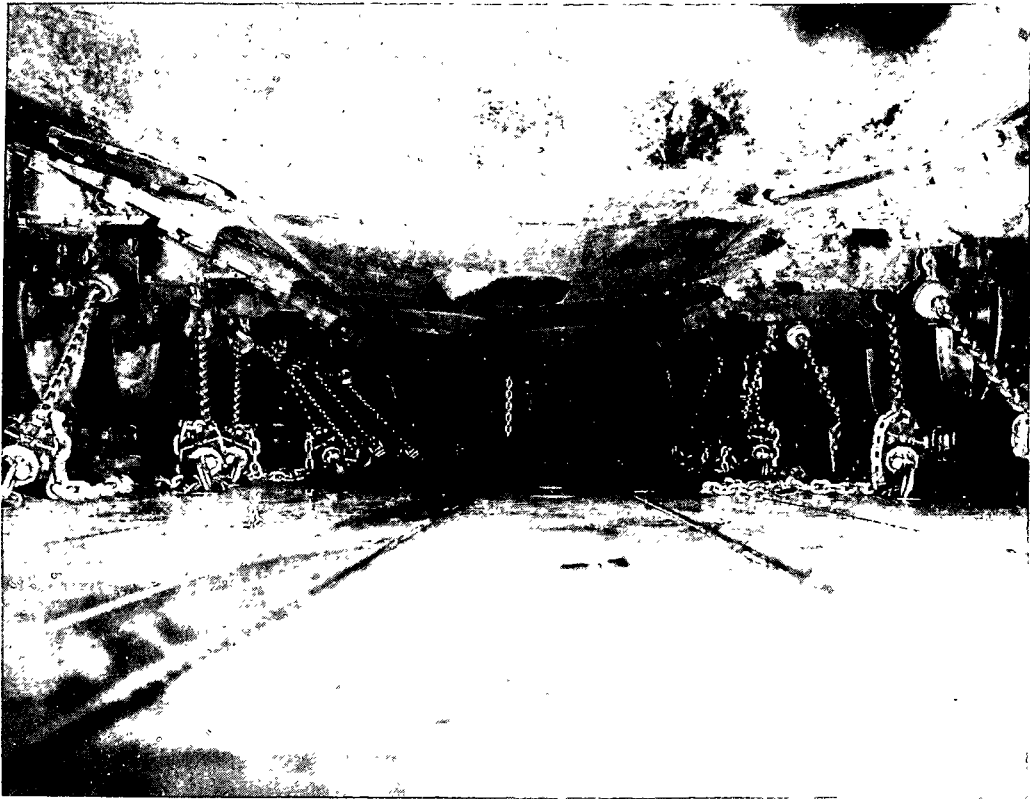


Figure 2-96. Tiedown of underside of M109 howitzer.

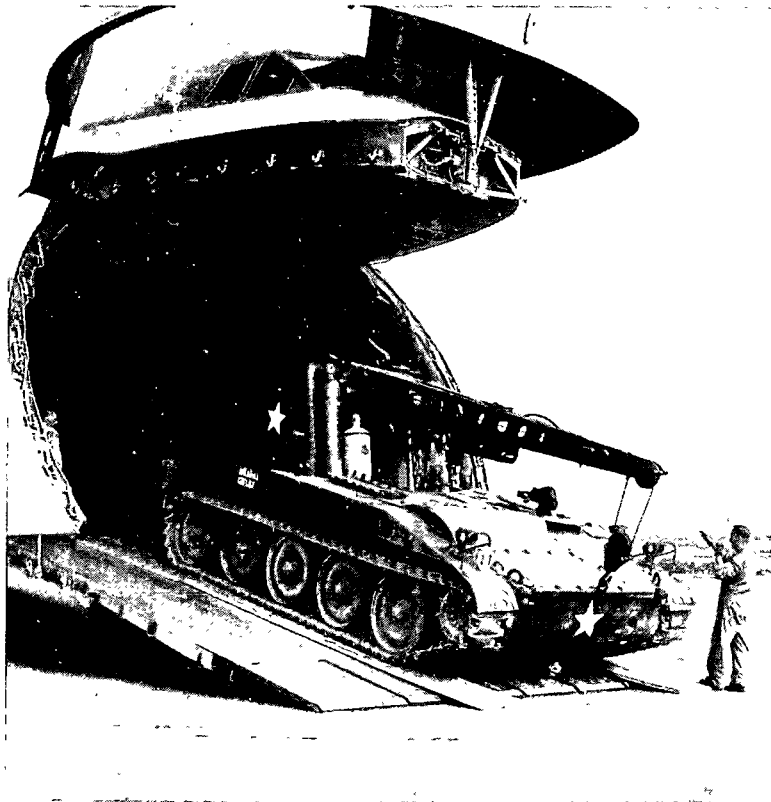


Figure 2-97. Offloading the M578 recovery vehicle over the forward ramp.

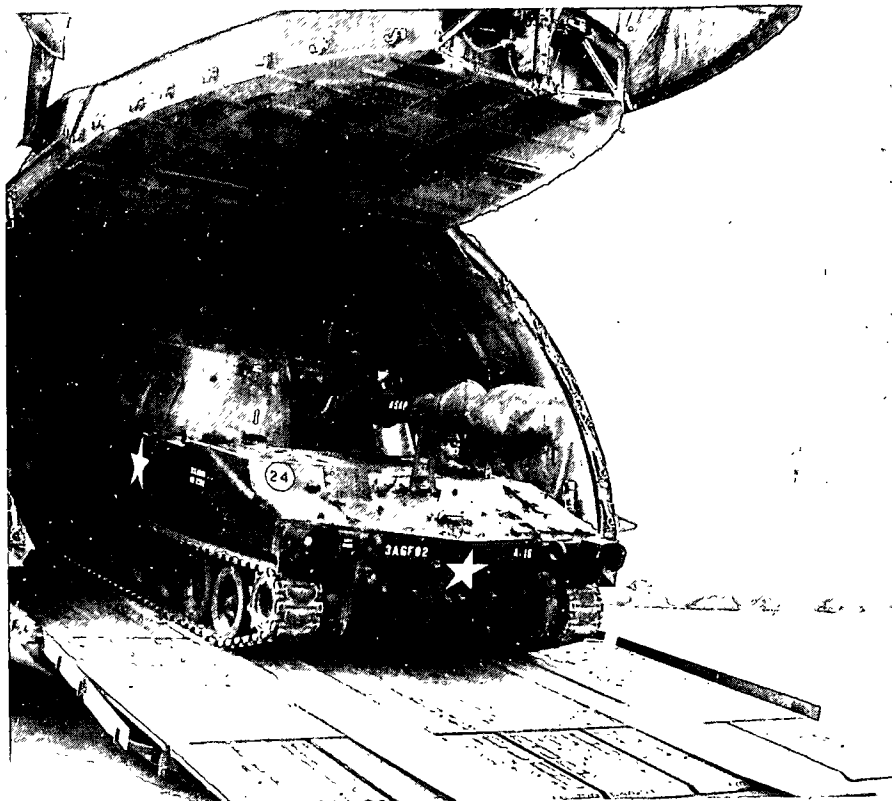


Figure 2-98. Offloading the M109 howitzer over the forward ramp.

Table 2-16. Tiedown Data for Load 2-16

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	B1	1	25,000	Clevis on towing socket LH side
	F1	1	25,000	Clevis on towing socket RH side
	C2	1	25,000	Second wheel axle LH side
	E2	1	25,000	Second wheel axle RH side
	C7	1	25,000	Fourth wheel axle LH side
	E7	1	25,000	Fourth wheel axle RH side
	B8	2	25,000	Rear lifting eye LH side
	F8	2	25,000	Rear lifting eye RH side
2	C8	1	25,000	Second wheel axle LH side
	E8	1	25,000	Second wheel axle RH side
	C9	1	25,000	Third wheel axle RH side
	E9	1	25,000	Third wheel axle LH side
	C12	1	25,000	Third wheel axle LH side
	E12	1	25,000	Third wheel axle RH side
	C14	1	25,000	Lower clevis LH side
	E14	1	25,000	Lower clevis RH side
3	D14	1	25,000	Hitch
	A12	2	25,000	Lifting eye under fender LH side
	G12	2	25,000	Lifting eye under fender RH side
	B12	1	25,000	Lifting eye LH side
	F12	1	25,000	Lifting eye RH side
	C13	1	25,000	First wheel axle LH side
	E13	1	25,000	First wheel axle RH side
	C17	1	25,000	Second wheel axle LH side
	E17	1	25,000	Second wheel axle RH side
	C18	1	25,000	Third wheel axle LH side
	E18	1	25,000	Third wheel axle RH side
	C20	1	25,000	Fourth wheel axle LH side
	E20	1	25,000	Fourth wheel axle RH side
	C22	2	25,000	Towing eye LH side
	E22	2	25,000	Towing eye RH side

Table 2-16—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
4	C19	1	25,000	Towing eye LH side
	E19	1	25,000	Towing eye RH side
	B19	1	25,000	Lifting eye LH side
	F19	1	25,000	Lifting eye RH side
	C23	1	25,000	Second wheel axle LH side
	E23	1	25,000	Second wheel axle RH side
	C24	1	25,000	Third wheel axle LH side
	E24	1	25,000	Third wheel axle RH side
	C25	1	25,000	Fourth wheel axle LH side
	E25	1	25,000	Fourth wheel axle RH side
	C26	1	25,000	Fifth wheel axle LH side
	E26	1	25,000	Fifth wheel axle RH side
	B29	2	25,000	Lifting eye LH side
	F29	2	25,000	Lifting eye RH side
	C29	1	25,000	Towing eye RH side
	E29	1	25,000	Towing eye LH side
5	B27	2	25,000	Lifting eye LH side
	F27	2	25,000	Lifting eye RH side
	C27	1	25,000	Towing eye RH side
	E27	1	25,000	Towing eye LH side
	C28	1	25,000	First wheel axle LH side
	E28	1	25,000	First wheel axle RH side
	C33	1	25,000	Fourth wheel axle LH side
	E33	1	25,000	Fourth wheel axle RH side
	C34	1	25,000	Fifth wheel axle LH side
	E34	1	25,000	Fifth wheel axle RH side
	C35	1	25,000	Hub between drive and seventh wheel LH side
	E35	1	25,000	Hub between drive and seventh wheel RH side
	C36	2	25,000	Lifting eye LH side
	E36	2	25,000	Lifting eye RH side
	C37	1	25,000	Towing eye RH side
	E37	1	25,000	Towing eye LH side

Section XVII. LOAD 2-17: TWO CARRIER, COMMAND RECONNAISSANCE M114A1; ONE CARRIER, PERSONNEL M113; ONE CARRIER, COMMAND POST M577A1; ONE CARRIER, 81MM MORTAR, M125A1; ONE TRUCK, WRECKER, 5-TON W/ WN M543A2; ONE TRUCK, VAN SHOP 2½-TON M109A2; ONE TRUCK, AMBULANCE ¼-TON, M718 (FIG 2-99)

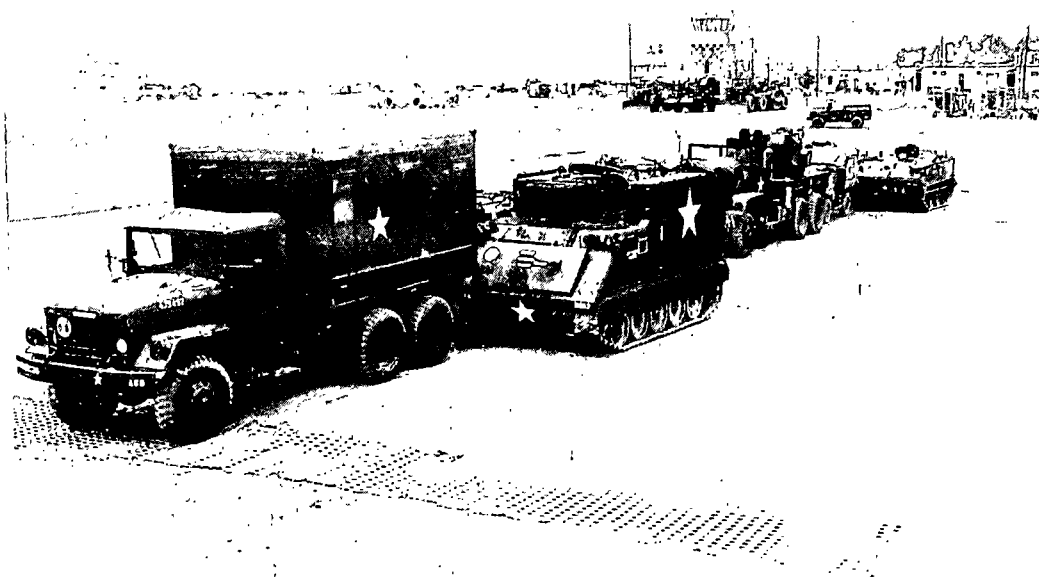


Figure 2-99. Vehicle lineup for load 2-17.

2-129. Airplane Loading Configuration

Airplane level kneeled with aft ramp in drive-in mode.

2-130. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-131. Materiel

Sufficient, minimum ½-inch thick, rolling and parking shoring to lay a 24-inch widepath 100 feet long into the airplane for a driveway. A lesser amount of shoring is required for this operation if the shoring is "leap-frogged" as the tracked vehicles are moved into the airplane.

2-132. Personnel and Duties

Six men load each tracked vehicle into the airplane in 5 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring. Two men load each truck. One man drives the truck and one man signals directions during loading.

2-133. Loading Instructions

- a. Position driveway shoring from aft ramp toes into the cargo compartment.
- b. Drive item 1 into the cargo compartment over

the aft ramp and park vehicle at station number prescribed in tiedown diagram (fig 2-100).

- c. Drive items 2, 3, and 4 into the airplane and park at prescribed stations.

- d. Remove remaining rolling and parking shoring and drive items 5 and 6 into the airplane and park at prescribed stations.

- e. Replace rolling and parking shoring for items 7 and 8 and drive the items into the airplane and park at prescribed stations.

2-134. Tiedown (See Caution in Paragraph 1-9 c)

- a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

- b. *Procedure.* Tie down all items in accordance with instructions in tiedown diagram (fig 2-100), tiedown data table 2-17, and figure 2-101.

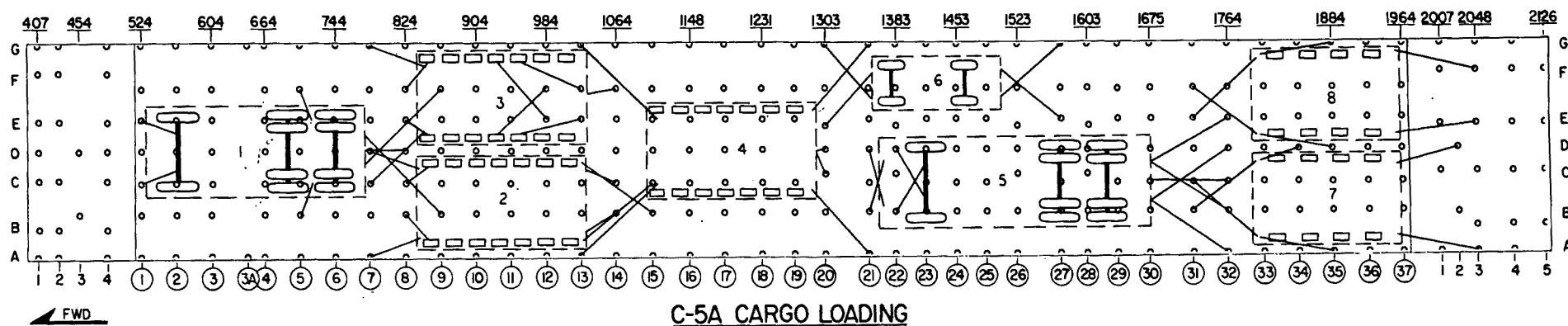
2-135. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane forward kneeled.

2-136. Offloading Instructions

- a. Offload all vehicles over forward ramp using driveway shoring for the tracked vehicles as shown in figure 2-102 through 2-106.

- b. Eight men offload the vehicles in 5 minutes.



LOAD 2-17

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	STA			
1 TRUCK, SHOP, VAN, 2 1/2-TON, M109	FWD	FRONT	528	15,770	1,980	
2 CARRIER, PERSONNEL, FT, ARMORED, M113	FWD	FRONT	836	20,030	1,120	SHORING REQUIRED
3 CARRIER, CP, LIGHT, TRACKED, M577	FWD	FRONT	840	21,590	1,208	SHORING REQUIRED
4 CARRIER, 81MM MORTAR, M125A1	FWD	FRONT	1,090	20,000	1,155	SHORING REQUIRED
5 TRUCK, MED, WRECKER, 5-TON, WVN, M543A2	FWD	FRONT	1,365	34,280	2,256	
6 TRUCK, AMBULANCE, FL, 1 1/4-TON, M718	FWD	FRONT	1,358	2,570	434	
7 CARRIER, CMB/RECON, ARMORED, M114A1	FWD	FRONT	1,790	15,276	762	SHORING REQUIRED
8 CARRIER, CMB/RECON, ARMORED, M114A1	FWD	FRONT	1,790	15,276	762	SHORING REQUIRED
TOTALS				144,792	9,377	

Figure 2-100. Tiedown diagram for load 2-17.

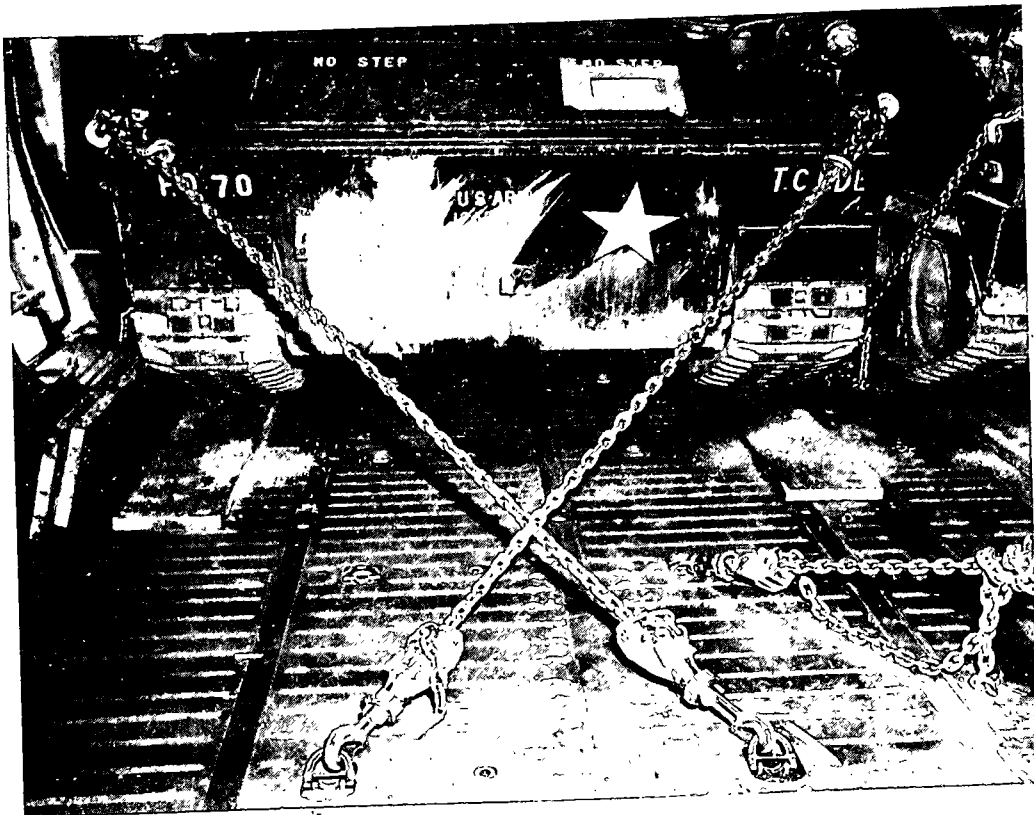


Figure 2-101. Tiedown of the M114 carrier.

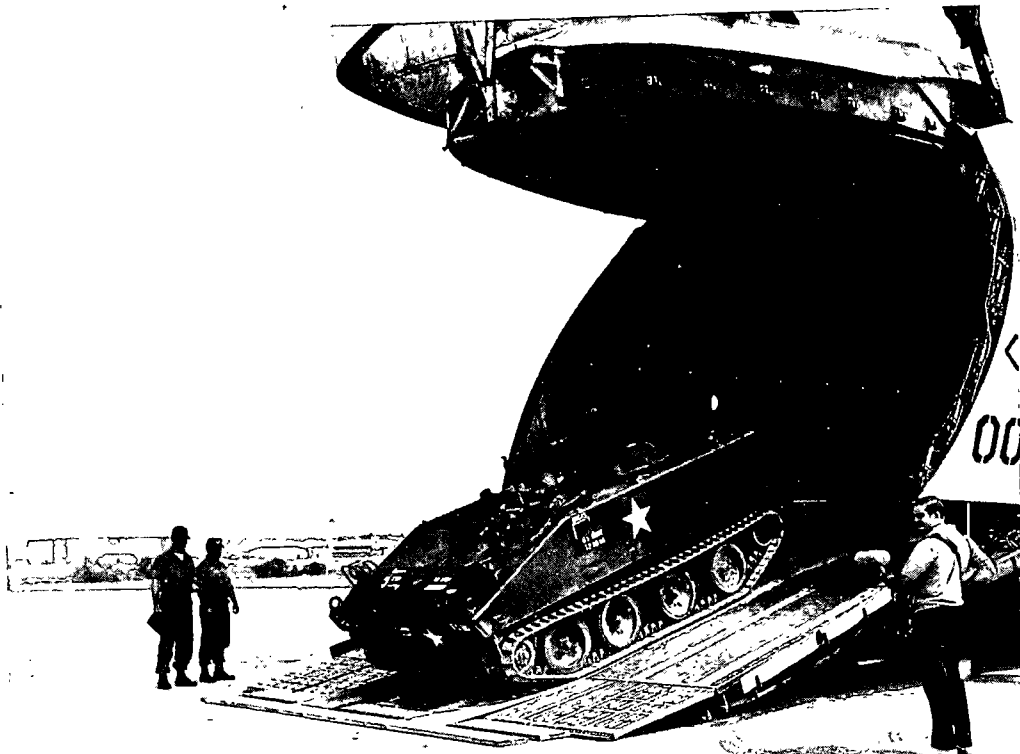


Figure 2-102. Offloading the M114 carrier over the forward ramp.

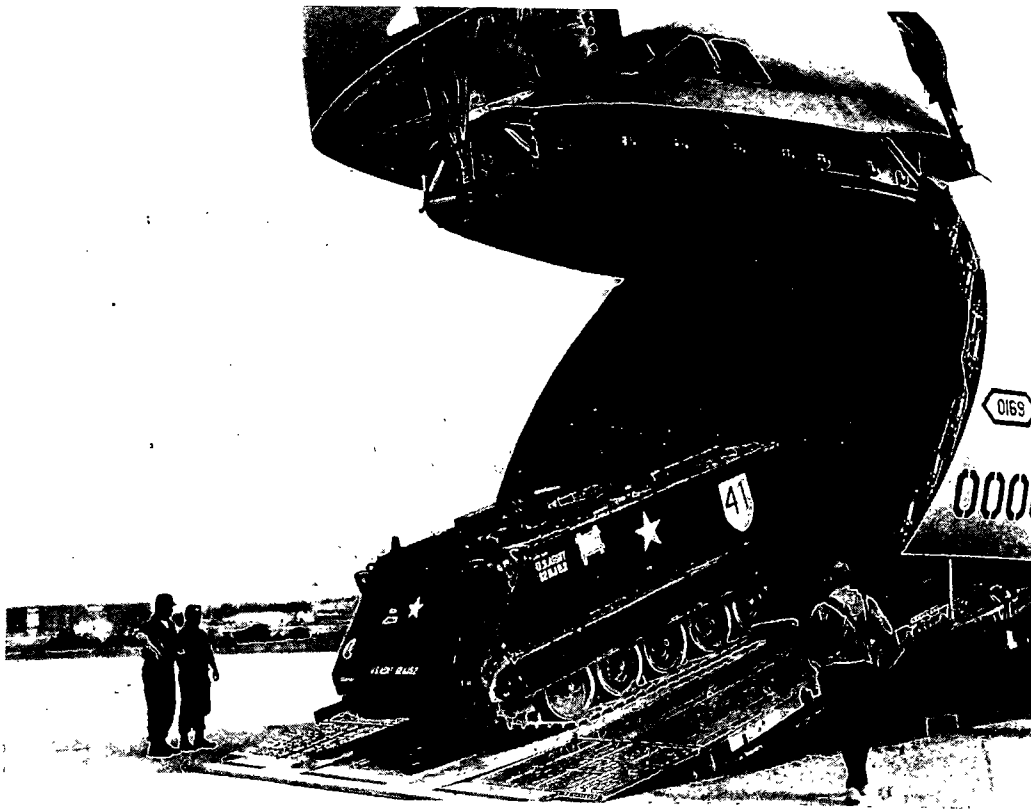


Figure 2-103. Offloading the M125 carrier over the forward ramp.

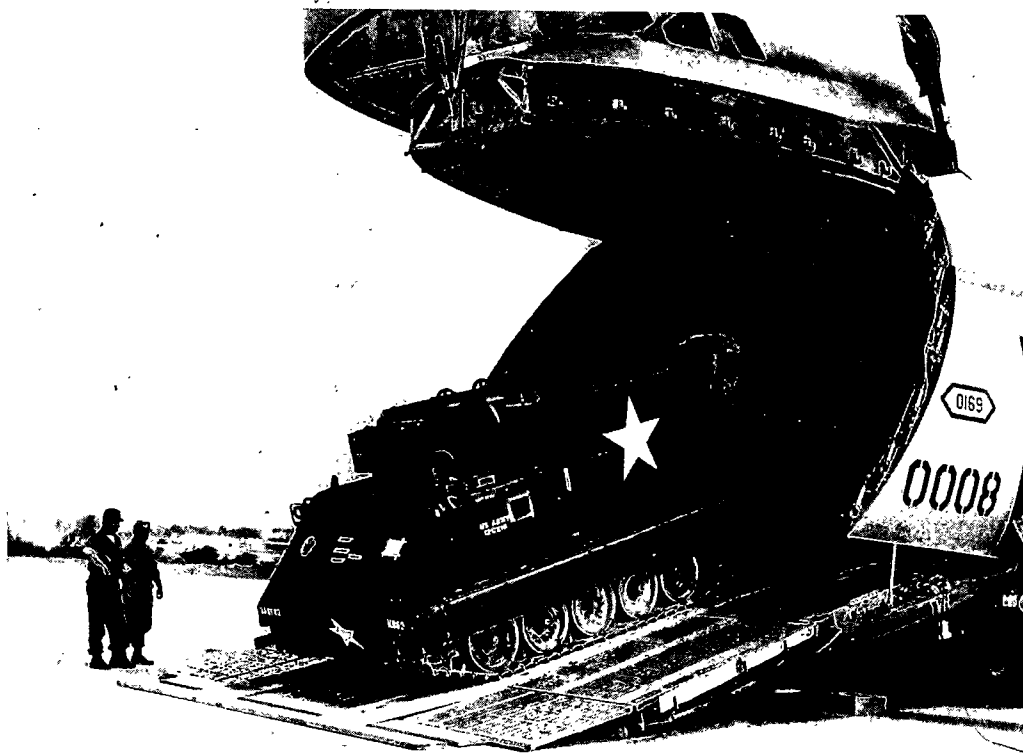


Figure 2-104. Offloading the M577 carrier over the forward ramp.

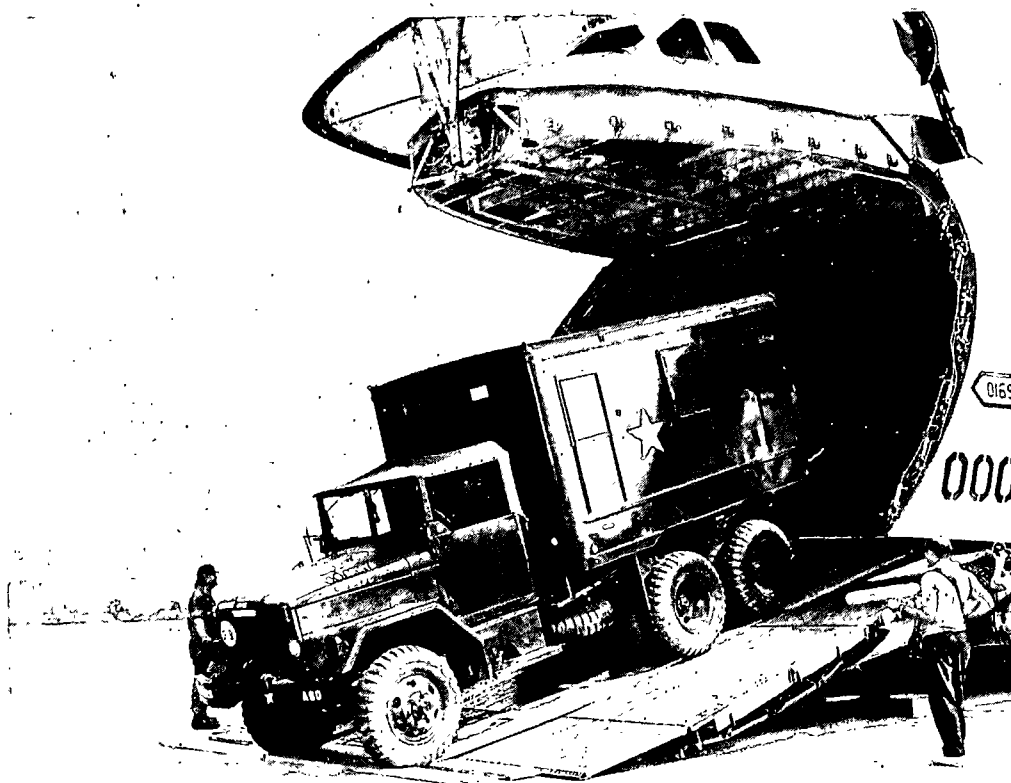


Figure 2-105. Offloading the M109 shop van over the forward ramp.

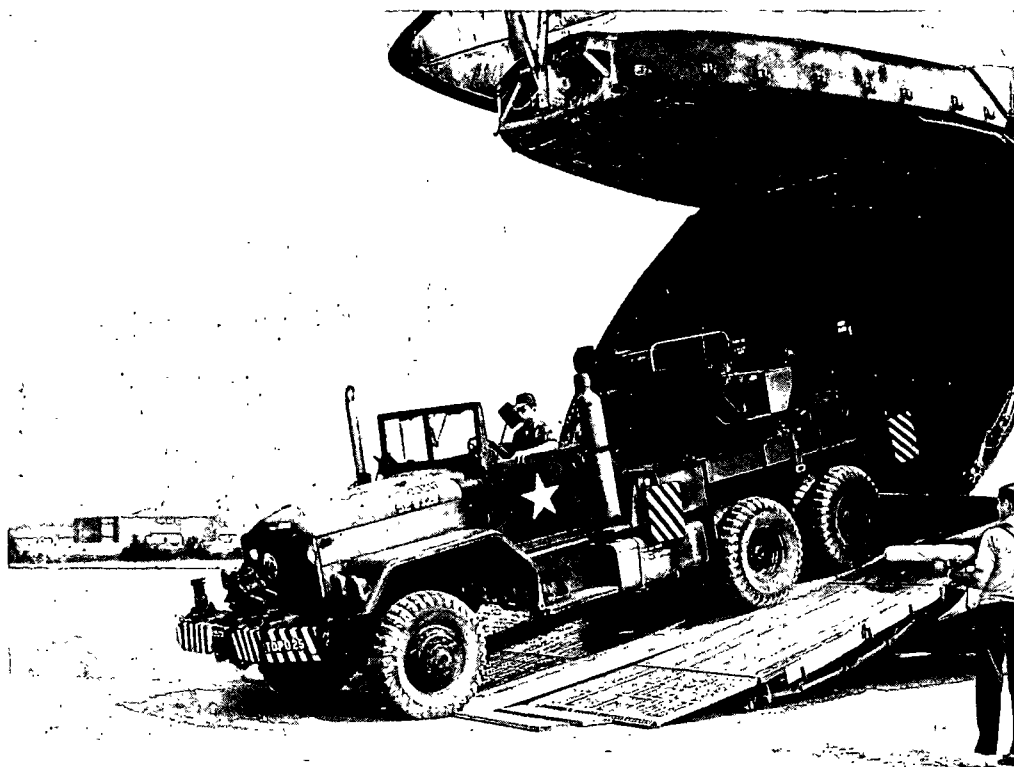


Figure 2-106. Offloading the M543 truck wrecker over the forward ramp.

Table 2-17. Tiedown Data for Load 2-17

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	C1	1	25,000	Front axle LH side
	E1	1	25,000	Front axle RH side
	B5	1	25,000	Lifting point above rear springs LH side
	F5	1	25,000	Lifting point above rear springs RH side
	D8	1	25,000	Pintle hook
	B9	2	25,000	Towing shackle RH side
	F9	2	25,000	Towing shackle LH side
2	A7	2	25,000	Lifting eye LH side
	D7	2	25,000	Lifting eye RH side
	B8	1	25,000	Drive wheel LH side
	C8	1	25,000	Drive wheel RH side
	B14	1	25,000	Tow eye LH side
	C14	1	25,000	Tow eye RH side
	B15	2	25,000	Lifting eye RH side
	C15	2	25,000	Lifting eye LH side
3	C7	1	25,000	Lifting eye LH side
	G7	1	25,000	Lifting eye RH side
	E8	1	25,000	Drive wheel LH side
	F8	1	25,000	Drive wheel RH side
	E12	1	25,000	Third road wheel axle RH side
	F12	1	25,000	Third road wheel axle LH side
	E13	1	25,000	Fourth road wheel axle LH side
	F13	1	25,000	Fourth road wheel axle RH side
	F15	1	25,000	Pintle hook
4	A13	2	25,000	Lifting eye LH side
	G13	2	25,000	Lifting eye RH side
	C20	1	25,000	Pintle hook
	D20	1	25,000	Pintle hook
	A21	2	25,000	Lifting eye LH side
	G21	2	25,000	Lifting eye RH side
5	B21	1	25,000	Frame aft of bumper RH side
	D21	1	25,000	Frame aft of bumper LH side
	B22	1	25,000	Front axle RH side
	D22	1	25,000	Front axle LH side
	A32	2	25,000	Clevis at bumperette LH side
	E32	2	25,000	Clevis at bumperette RH side
	C32	1	25,000	Pintle hook
	B32	1	25,000	Bumperette RH side
	D32	1	25,000	Bumperette LH side
6	E20	1	10,000	Clevis at bumper RH side
	G20	1	10,000	Clevis at bumper LH side
	E27	1	10,000	Clevis at bumperette RH side
	G27	1	10,000	Clevis at bumperette LH side
7	B31	2	25,000	Front lifting eye RH side
	C31	2	25,000	Front lifting eye LH side
	A35	1	25,000	Front lifting eye LH side
	D34	1	25,000	Front lifting eye RH side
	A3 Aft	Ramp 1	25,000	Rear lifting eye LH side
	D2 Aft	Ramp 1	25,000	Rear lifting eye RH side
8	E31	2	25,000	Front lifting eye RH side
	F31	2	25,000	Front lifting eye LH side
	D35	1	25,000	Front lifting eye LH side
	G35	1	25,000	Front lifting eye RH side
	E3 Aft	Ramp 1	25,000	Rear lifting eye LH side
	F3 Aft	Ramp 1	25,000	Rear lifting eye RH side

Section XVIII. LOAD 2-18: SIX CARRIER, PERSONNEL, ARMORED M113; ONE TRUCK, CARGO 2½-TON M35A2; ONE TRAILER, CARGO 1½-TON M105A2; ONE TRUCK, UTILITY ¼-TON M151A1; ONE TRAILER, CARGO ¼-TON M416; ONE TRUCK, UTILITY ¼-TON M151A1C W/106MM MOUNTED; ONE CARRIER, COMMAND/RECONNAISSANCE ARMORED M114A1; ONE CARRIER 81MM MORTAR M125A1 (FIG 2-107)

NOTE

This load configuration reflects design aircraft load and may require altering for reduced ACL.



Figure 2-107. Vehicle lineup for load 2-18.

2-137. Airplane Loading Configuration

Airplane level kneeled and aft ramp in drive-in mode.

2-138. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-139. Materiel

Sufficient, minimum ½-inch thick, rolling and parking shoring to lay a 24-inch wide path 160 feet long in the airplane for each tracked vehicle driveway.

2-140. Personnel and Duties

a. Six men load each tracked vehicle into the airplane in two minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring.

b. Two men load each truck. One man drives the

truck and one man signals directions during loading.

2-141. Loading Instructions

a. Position driveway shoring from aft ramp toes into the cargo compartment.

b. Drive each item into the cargo compartment over the aft ramp in the numbered sequence indicated in tiedown diagram (fig 2-108). Park each vehicle at the prescribed station number in the tiedown diagram.

2-142. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 35 minutes.

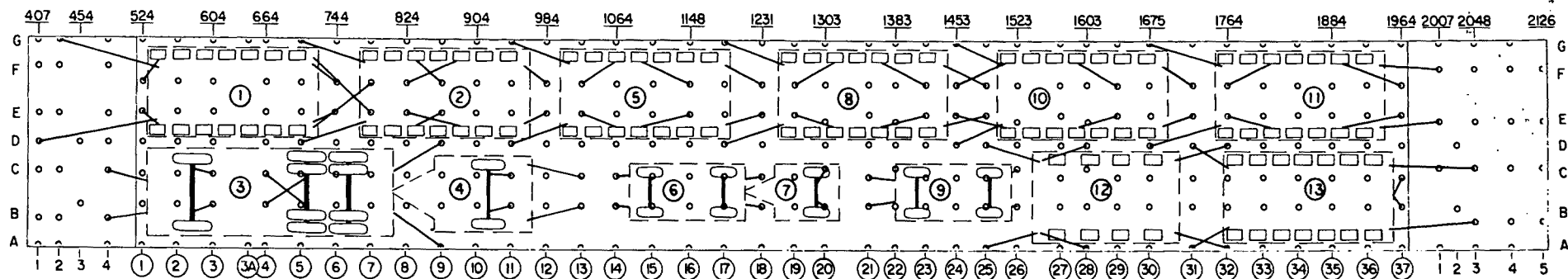
b. *Procedure.* Tie down all items in accordance with instructions in tiedown data table 2-18 and tiedown diagram (fig 2-108).

2-143. Airplane Offloading Configuration

Airplane level kneeled with forward ramp in drive-off mode.

2-144. Offloading Instructions

- a. Offload all vehicles over forward ramp using driveway shoring for the tracked vehicles.
- b. Remove all shoring from the airplane.
- c. Twelve men offload the vehicles in 8 minutes.



C-5A CARGO LOADING

LOAD 2-18

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP - RP	STA	WEIGHT	CUBE	REMARKS
1 CARRIER, PERSONNEL FT, ARMORED M113	FWD	FRONT	530	20,030	1,120	SHORING REQUIRED
2 CARRIER, PERSONNEL FT, ARMORED M113	FWD	FRONT	770	20,030	1,120	SHORING REQUIRED
3 TRUCK, CARGO, 2 1/2-TON WOH, M105A2	FWD	FRONT	530	13,530	1,493	
4 TRAILER, CARGO, 1 1/2-TON, M105A2	FWD	REAR	970	2,750	781	
5 CARRIER, PERSONNEL FT, ARMORED M113	FWD	FRONT	1000	20,030	1,120	SHORING REQUIRED
6 TRUCK, UTILITY, 1 1/4-TON, M151A1	FWD	FRONT	1080	2,350	370	
7 TRAILER, CARGO, 1 1/4-TON, M16	FWD	REAR	1320	590	170	
8 CARRIER, PERSONNEL FT, ARMORED M113	FWD	FRONT	1250	20,030	1,120	SHORING REQUIRED
9 TRUCK, UTILITY, 1 1/4-TON, M151A1	FWD	FRONT	1383	2,350	370	
10 CARRIER, PERSONNEL FT, ARMORED M113	FWD	FRONT	1500	20,030	1,120	SHORING REQUIRED
11 CARRIER, PERSONNEL FT, ARMORED M113	FWD	FRONT	1750	20,030	1,120	SHORING REQUIRED
12 CARRIER, COMMAND: ARMORED M114A1	FWD	FRONT	1540	15,276	762	SHORING REQUIRED
13 CARRIER, FT, 81MM MORTAR M125A1	FWD	FRONT	1760	20,000	1,155	SHORING REQUIRED
				177,026	12,021	

Figure 2-108. Tiedown diagram for load 2-18.

Table 2-18. Tiedown Data for Load 2-18

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1.	D1 (fwd ramp)	2	25,000	Lifting eye LH side
	G2 (fwd ramp)	2	25,000	Lifting eye RH side
	E1	1	25,000	Drive wheel LH side
	F1	1	25,000	Drive wheel RH side
	E6	1	25,000	Tow eye LH side
	F6	1	25,000	Tow eye RH side
	E7	2	25,000	Lifting eye RH side
	F7	2	25,000	Lifting eye LH side
2	D5	2	25,000	Lifting eye LH side
	G5	2	25,000	Lifting eye RH side
	E8	1	25,000	Fourth road wheel LH side
	F8	1	25,000	Fourth road wheel RH side
	E9	1	25,000	Second road wheel LH side
	F9	1	25,000	Second road wheel RH side
	E12	1	25,000	Tow eye LH side
	F12	1	25,000	Tow eye RH side
3	B3	1	25,000	Front axle LH side
	C3	1	25,000	Front axle RH side
	B4	1	25,000	Front rear axle RH side
	C4	1	25,000	Front rear axle LH side
	A9	1	25,000	Clevis at bumperette LH side
	D9	1	25,000	Clevis at bumperette RH side
	B4 (fwd ramp)	1	25,000	Clevis at bumper LH side
	C4 (fwd ramp)	1	25,000	Clevis at bumper RH side
4	B11	1	10,000	Axle LH side
	C11	1	10,000	Axle RH side
	B13	1	10,000	Rear frame LH side
	C13	2	25,000	Rear frame RH side
5	D11	2	25,000	Lifting eye LH side
	G11	2	25,000	Lifting eye RH side
	E13	1	25,000	Second road wheel LH side
	F13	1	25,000	Second road wheel RH side
	E16	1	25,000	Third road wheel LH side
	F16	1	25,000	Third road wheel RH side
	E18	1	25,000	Tow eye LH side
	F18	1	25,000	Tow eye RH side
6	B14	1	10,000	Clevis at bumper LH side
	C14	1	10,000	Clevis at bumper RH side
	B18	1	10,000	Clevis at bumperette LH side
	C18	1	10,000	Clevis at bumperette RH side
7	B20	1	10,000	Axle RH side
	C20	1	10,000	Axle RH side
8	D17	2	25,000	Lifting eye LH side
	G17	2	25,000	Lifting eye RH side
	E19	1	25,000	Second road wheel LH side
	F19	1	25,000	Second road wheel RH side
	E23	1	25,000	Fourth road wheel LH side
	F23	1	25,000	Fourth road wheel RH side
	E25	1	25,000	Tow eye LH side
	F25	1	25,000	Tow eye RH side
9	B21	1	10,000	Clevis at bumper LH side
	C21	1	10,000	Clevis at bumper RH side
	B26	1	10,000	Clevis at bumperette LH side
	C26	1	10,000	Clevis at bumperette RH side

Table 2-18—Continued

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
10	D24	2	25,000	Lifting eye LH side
	G24	2	25,000	Lifting eye RH side
	E24	1	25,000	Drive wheel LH side
	F24	1	25,000	Drive wheel RH side
	E29	1	25,000	Third road wheel LH side
	F29	1	25,000	Third road wheel RH side
	E31	1	25,000	Tow eye LH side
	F31	1	25,000	Tow eye RH side
11	D30	2	25,000	Lifting eye LH side
	G30	2	25,000	Lifting eye RH side
	E32	1	25,000	Second road wheel LH side
	F32	1	25,000	Second road wheel RH side
	E37	1	25,000	Fifth road wheel LH side
	F37	1	25,000	Fifth road wheel RH side
12	A25	2	25,000	Front lifting eye LH side
	D25	2	25,000	Front lifting eye RH side
	A28	1	25,000	Front lifting eye LH side
	D28	1	25,000	Front lifting eye RH side
	A32	1	25,000	Rear lifting eye LH side
	D32	1	25,000	Rear lifting eye RH side
13	A31	2	25,000	Front lifting eye LH side
	D31	2	25,000	Front lifting eye RH side
	B37	1	25,000	Pintle hook
	C37	1	25,000	Pintle hook
	B (aft ramp)	2	25,000	Rear lifting eye LH side
	C (aft ramp)	2	25,000	Rear lifting eye RH side

Section XIX. LOAD 2-19: ONE TRUCK, WRECKER 5-TON W / WN M543A2; ONE TRUCK, VAN SHOP 2½-TON M109A2; TWO HELICOPTER, OBSERVATION OH-6A; ONE HELICOPTER, OBSERVATION OH-58A; ONE TRUCK, CARGO 2½-TON M35A2; ONE TRAILER, CARGO 1½-TON M105A2; THREE TRUCK, CARGO ¾-TON W / WN M37B1; THREE TRAILER, CARGO ¾-TON M101A1; THREE TRUCK, UTILITY ¼-TON M151A1; THREE TRAILER, CARGO ¼-TON M416

2-145. Airplane Loading Configuration

Airplane forward kneeled and forward and aft ramp in drive-in mode.

2-146. Preparing the Items

a. Prepare the vehicles in accordance with instructions in paragraph 1-6.

b. The OH-6A and OH-58A helicopters are loaded with minimum disassembly. Two opposite main rotor blades of the OH-6A helicopters requires removal for loading aboard the airplane. The OH-58A helicopter requires no disassembly.

2-147. Materiel

a. OH-6A Helicopter.

- (1) Two sets of ground handling wheels.
- (2) Fifty square feet of ½-inch thick felt sheeting, or suitable substitute, for padding the attached rotor blades and the cargo doors.

(3) Two hundred feet of 550-pound nylon cord, or a suitable substitute, for tying down the tail and main rotor blades to the tail boom, and restraining the cargo doors in the helicopter cargo compartment.

(4) Three MB-1 tiedown device chains for a towing bridle.

(5) One 15-foot tiedown strap, or suitable substitute, used during loading as a tag line for control of the unsecured, still attached, rotor blades.

(6) Six mattresses, or suitable substitute, for cushioning the four removed rotor blades.

b. OH-58A Helicopter.

- (1) One set of ground handling wheels.
- (2) Three MB-1 tiedown device chains for a towing bridle.

(3) Three small clevis assemblies, for use in tiedown of the helicopter.

(4) One main rotor blade tiedown strap (with attached boot), used to restrain the rotor blades.

2-148. Personnel and Duties

a. OH-6A Helicopter.

(1) Remove two opposite main rotor blades and place on mattress. The blades will be tied down on mattresses beside the helicopters when loaded in the airplane.

(2) Rotate the attached blades to a fore and aft position.

(3) Wrap the aft attached blade about 2 feet from its end with a 12- by 18-inch piece of ½-inch felt sheeting. Pass 550-pound cord around the felt and the blade, then around the tail boom. Tie the ends of the cord together so the blades are held in a horizontal position along the length axis of the helicopter.

(4) Attach / lower the ground handling wheels as shown in figure 2-109.

(5) Form a towing bridle with three MB-1 tiedown device chains (fig 2-109).

b. OH-58A Helicopter.

(1) Rotate the main rotor blades to a fore and aft position.

(2) Fit the boot of the rotor blade tiedown strap over the end of the aft rotor blade, and wrap the straps around the helicopter tail boom.

(3) Attach a small clevis assembly to each of the three jack-tiedown fittings (two forward and one aft).

(4) Attach / lower the ground handling wheels.

(5) Form a towing bridle with the three MB-1 tiedown device chains.

2-149. Loading Instructions

a. Materiel.

(1) Six 1½- by 8-foot ¾-inch plywood boards used as parking shoring under the helicopter skids.

(2) Two 2- by 8-foot ¾-inch plywood boards for a ramp-toe extension when loading the helicopters.

b. Personnel and Time. Two men load each vehicle in 2 minutes. Five men load each helicopter in 5 minutes.

c. Procedure.

(1) The helicopter loading team consists of five men. One man at the side of the helicopter nearest the airplane, two men at the empennage to

control movement of the helicopter and to observe clearance, one man at the rotor blade tag line to hold the rotor blade down and control its movement, and the team leader who gives instructions to the loading team.

(2) Load the vehicles over the aft ramp in their numbered sequence and park at the tiedown location prescribed in tiedown diagram (fig 2-110).

(3) Position the helicopter, facing in the appropriate direction in front of the forward ramp, in line with the ramp-toe extension.

(4) Attach the airplane winch cable hook to the towing bridle.

(5) Position the two 2- by 8-foot ¾-inch plywood boards to form a ramp-toe extension.

(6) Winch the helicopter up the ramp into the airplane as shown in figure 2-111.

(7) Unhook the winch cable, remove the towing bridle, and man-handle the helicopter to its tiedown location onto the parking shoring.

(8) Raise the ground handling wheels.

(9) Load the remaining helicopters in numbered sequence.

2-150. Tiedown (See Caution in Paragraph 1-9 c)

a. Materiel. A minimum of 31 CGU-1B tiedown devices are required for tiedown of the helicopters.

b. Personnel and Time. Eight men tie down the vehicles in 25 minutes. Four men tie down each helicopter in 10 minutes.

c. Procedure. Tie down the helicopters and vehicles in accordance with the instructions in tiedown data table 2-19, tiedown diagram (fig 2-110), and figures 2-112 through 2-115.

2-151. Airplane Offloading Configuration

Airplane forward kneeled with both ramps in drive-off mode.

2-152. Offloading Instructions

a. Personnel and Time. Five men offload each helicopter in 5 minutes. Two men offload each vehicle in one minute.

b. Procedure. Offloading is the reverse of loading, except the winch is used for braking the helicopter as it is manhandled down the ramp. A lumber ramp-toe extension is required when offloading the helicopters. Remove the parking shoring from the airplane as each helicopter is offloaded.

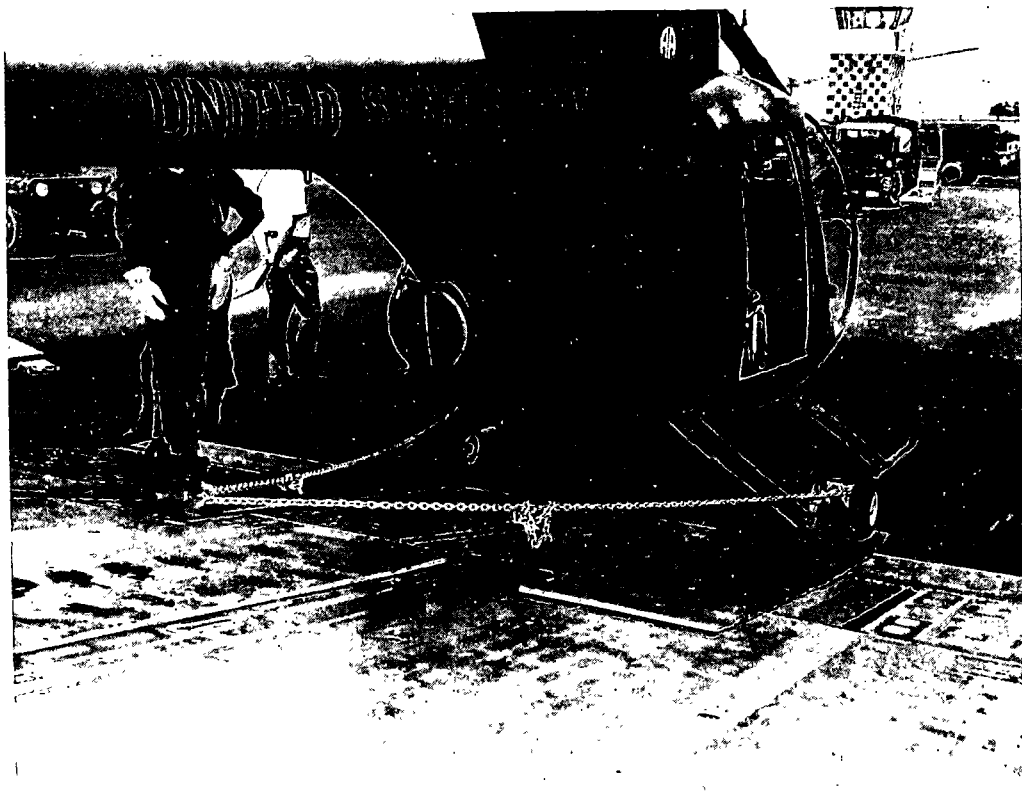
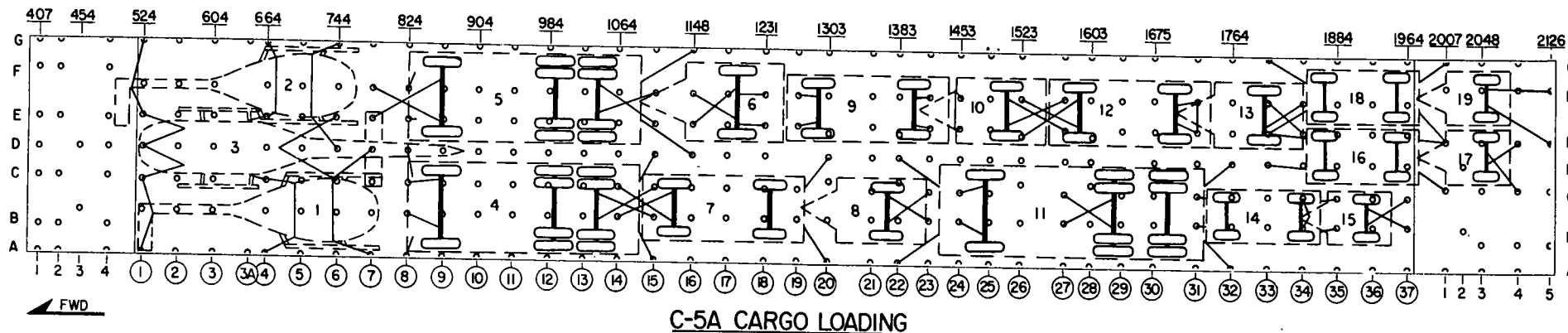


Figure 2-109. OH-6A in position at foot of the forward ramp. Note attachment of the towing bridle to the towing eye of the ground handling wheels, and the position of the ramp-toe extension.



LOAD 2-19

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP	WEIGHT	CUBE	REMARKS
1 HELICOPTER, OBSERVATION, OH-6A	AFT	TAIL	465	1,510	1,658
2 HELICOPTER, OBSERVATION, OH-6A	AFT	TAIL	260	1,510	1,658
3 HELICOPTER, OBSERVATION, OH-6A	FWD	TAIL	260	1,956	1,836
4 TRUCK, SHOP VAN, 2 1/2-TON, M109	FWD	FRONT	825	15,770	1,980
5 TRUCK, CARGO, 2 1/2-TON, M35A2	FWD	FRONT	825	13,530	1,693
6 TRAILER, CARGO, 1 1/2-TON, M105A2	FWD	REAR	1252	2,750	781
7 TRUCK, CARGO, 3/4-TON, W/WW, M37B1	FWD	FRONT	1090	5,820	846
8 TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	1415	1,280	519
9 TRUCK, CARGO, 3/4-TON, W/WW, M37B1	FWD	FRONT	1250	5,820	846
10 TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	1432	1,280	519
11 TRUCK, WRECKER, 5-TON, W/WW, M543A2	FWD	FRONT	1430	34,280	2,256
12 TRUCK, CARGO, 3/4-TON, W/WW, M37B1	FWD	FRONT	1554	5,820	846
13 TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	1844	1,280	519
14 TRUCK, UTILITY, 1/4-TON, M35A1	FWD	FRONT	1736	2,350	370
15 TRAILER, CARGO, 1/4-TON, M416	FWD	REAR	1946	590	170
16 TRUCK, UTILITY, 1/4-TON, M35A1	FWD	FRONT	1860	2,350	370
17 TRAILER, CARGO, 1/4-TON, M416	FWD	REAR	2086	590	170
18 TRUCK, UTILITY, 1/4-TON, M35A1	FWD	FRONT	1860	2,350	370
19 TRAILER, CARGO, 1/4-TON, M416	FWD	REAR	2086	590	170
TOTALS			101,428	17,577	

Figure 2-110. Tiedown diagram for load 2-19.

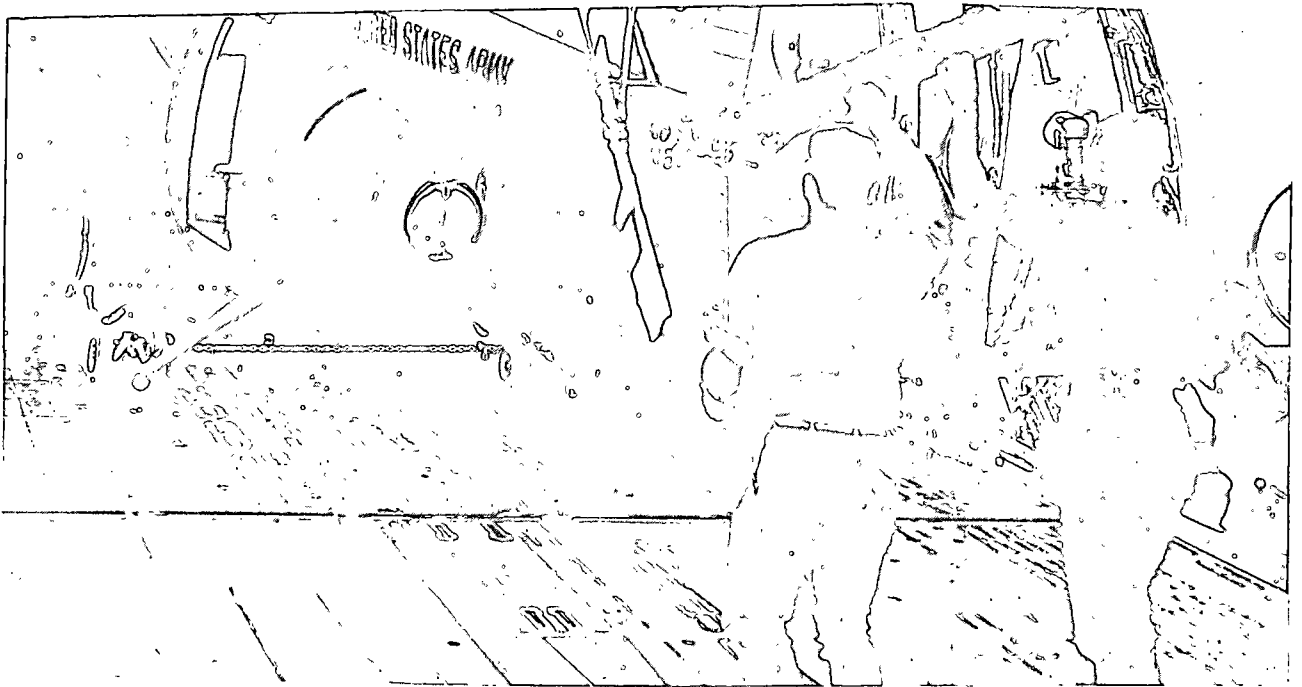


Figure 2-111. Winching the OH-6A up the forward ramp.

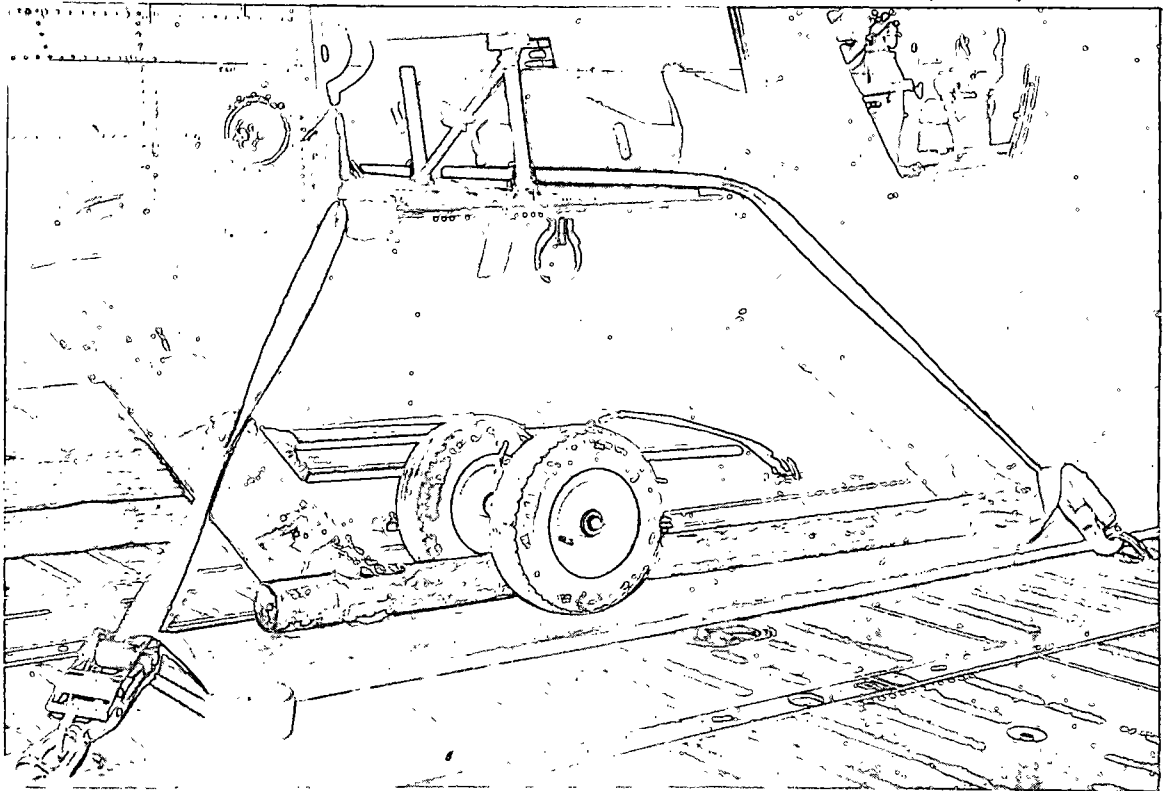


Figure 2-112. Tiedown of the OH-6A. Note the felt padding under the tiedown straps, and the position of the parking shoring.

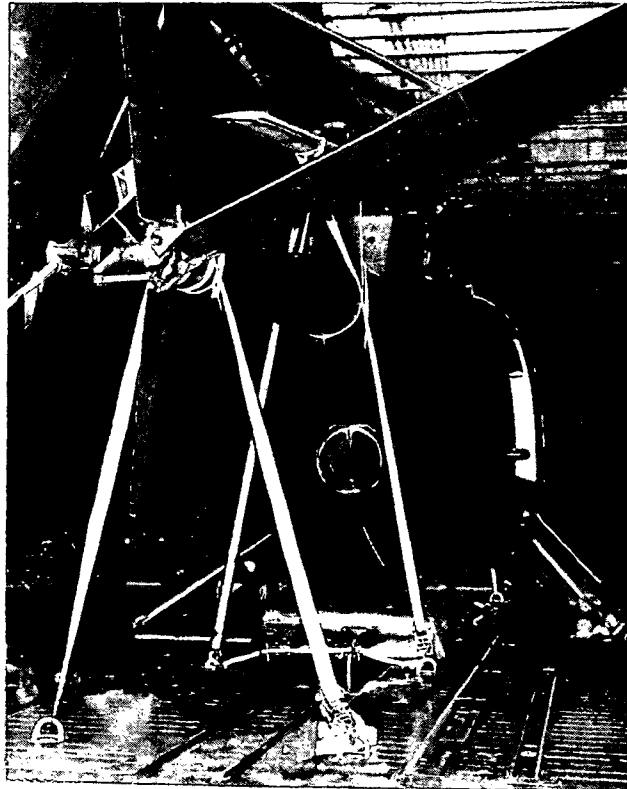


Figure 2-113. Tiedown of the OH-6A. Note the restraining cords from the tail rotor to the tail boom and the tiedown straps from the main rotor blade.

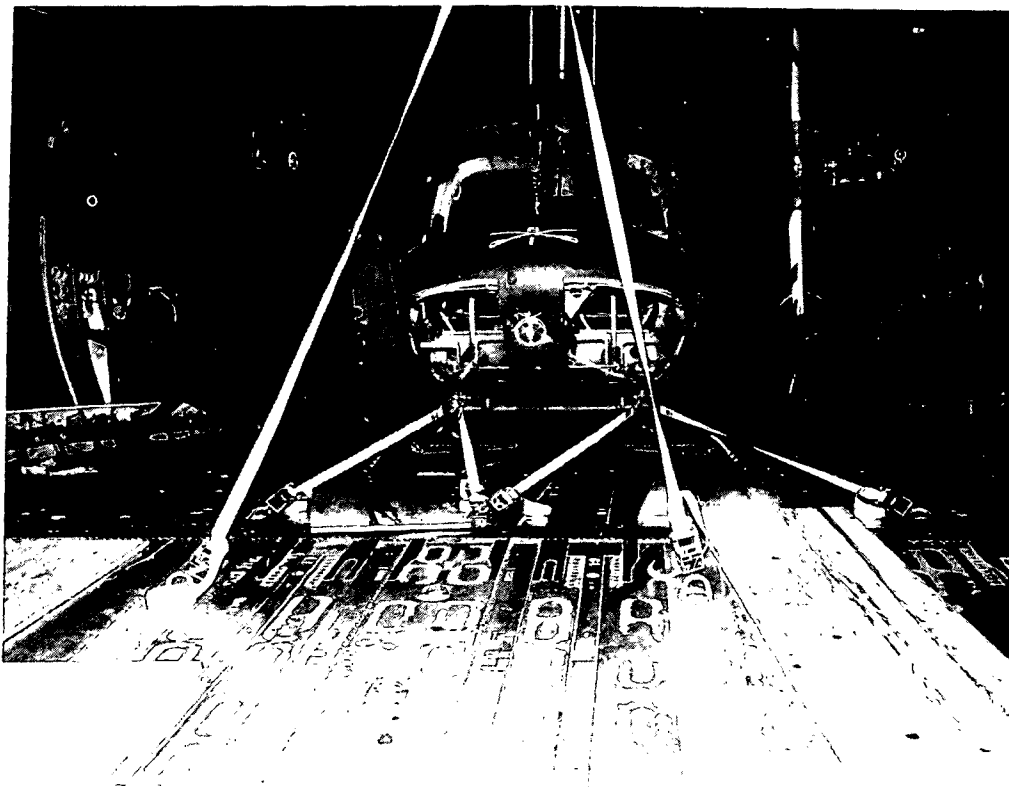


Figure 2-114. Tiedown of the OH-58A.

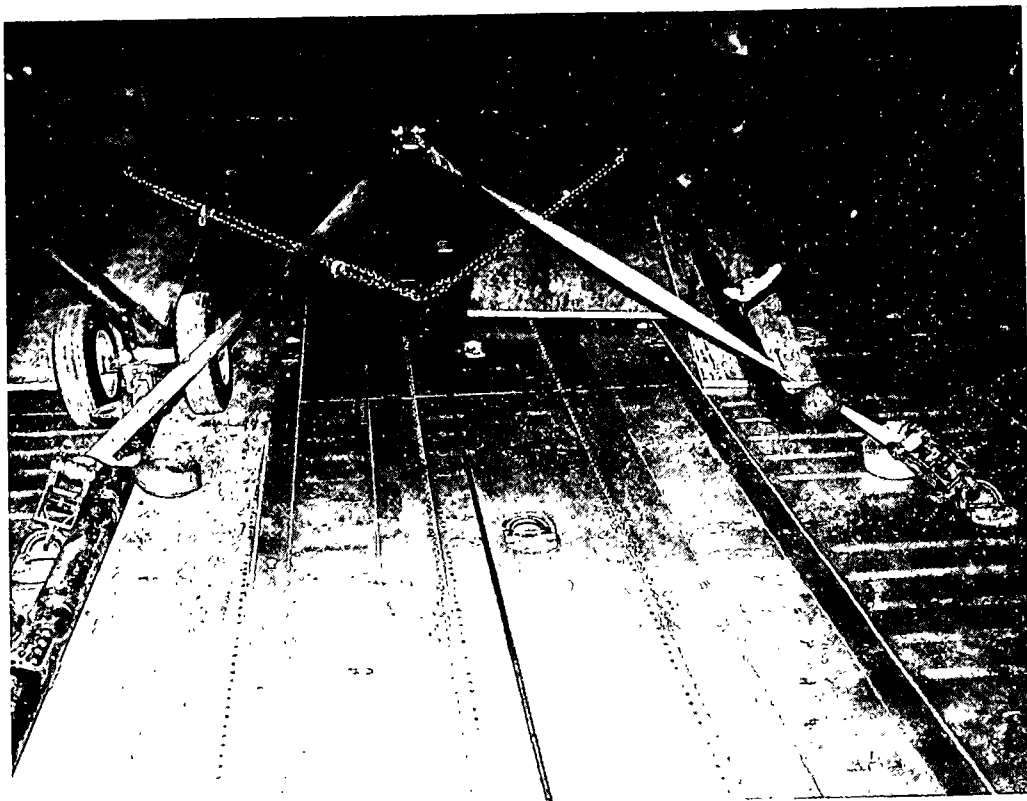


Figure 2-115. Tiedown of the OH-58A. Note towing bridle.

Table 2-19. Tiedown data for load 2-19

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	A1 / C1	2	5,000	Around tail boom
	A4 / C4	2	5,000	Through cargo compartment
	A7 / D7	2	5,000	Through cargo compartment
	A2 / D2	2	5,000	Around aft rotor blade
	A7 / C7	2	5,000	Around fwd rotor blade
2	E1 / G1	2	5,000	Around tail boom
	E4 / G4	2	5,000	Through cargo compartment
	D6 / G6	2	5,000	Through cargo compartment
	E1 / F1	2	5,000	Around aft rotor blade
	E6 / G6	2	5,000	Around fwd rotor blade
3	C1	1	5,000	Fwd jacking-tiedown fitting LH side
	D1	1	5,000	Fwd jacking-tiedown fitting LH side
	D1	1	5,000	Fwd jacking-tiedown fitting RH side
	E1	1	5,000	Fwd jacking-tiedown fitting RH side
	C6	1	5,000	Aft jacking-tiedown fitting
	E6	1	5,000	Aft jacking-tiedown fitting
	C4	1	5,000	Aft cross tube LH side
	E4	1	5,000	Aft cross tube RH side
	C4 / E4	2	5,000	Around fwd rotor blade
	Fwd ramp			
4	C6 / E6	2	5,000	Around aft rotor blade
	A8	1	25,000	Frame at bumper LH side
	D8	1	25,000	Frame at bumper RH side
	B8	1	25,000	Front axle LH side
	A15	1	25,000	Rear clevis LH side
	D15	1	25,000	Rear clevis RH side
	B15	1	25,000	Rear axle RH side
	C15	1	25,000	Rear axle LH side
5	E7	1	25,000	Front axle RH side
	F7	1	25,000	Front axle LH side
	E8	1	25,000	Frame at bumper LH side

Table 2-19—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
5	F8	1	25,000	Frame at bumper RH side
	E15	1	25,000	Rear axle RH side
	F15	1	25,000	Rear axle LH side
	D16	1	25,000	Rear clevis LH side
	G16	1	25,000	Rear clevis RH side
6	E16	1	10,000	Axle RH side
	F16	1	10,000	Axle LH side
	E18	1	10,000	Axle LH side
	F18	1	10,000	Axle RH side
7	B14	1	10,000	Front axle RH side
	C14	1	10,000	Front axle LH side
	A20	1	10,000	Rear clevis LH side
	D20	1	10,000	Rear clevis RH side
8	B23	1	10,000	Axle RH side
	C23	1	10,000	Axle LH side
9	E19	1	10,000	Front axle LH side
	F19	1	10,000	Front axle RH side
	E23	1	10,000	Rear axle LH side
	F23	1	10,000	Rear axle RH side
10	E24 / F24	1	5,000	Across lunette
	E27	1	10,000	Axle RH side
	F27	1	10,000	Axle LH side
11	A22	1	25,000	Front clevis LH side
	D22	1	25,000	Front clevis RH side
	B24	1	25,000	Front axle LH side
	C24	1	25,000	Front axle RH side
	B27	1	25,000	Front rear axle RH side
	C27	1	25,000	Front rear axle LH side
	A32	1	25,000	Rear clevis LH side
	D32	1	25,000	Rear clevis RH side
12	E26	1	10,000	Front axle RH side
	F26	1	10,000	Front axle LH side
	E31	1	10,000	Rear axle RH side
	F31	1	10,000	Rear axle LH side
13	E31 / F31	1	5,000	Across lunette
	E34	1	10,000	Axle RH side
	F34	1	10,000	Axle LH side
14	B31	1	10,000	Front clevis LH side
	C31	1	10,000	Front clevis RH side
	B35	1	10,000	Rear clevis LH side
	C35	1	10,000	Rear clevis RH side
15	B34 / C34	1	5,000	Across lunette
	B37	1	5,000	Axle RH side
	C37	1	5,000	Axle LH side
16	D33	1	10,000	Front clevis LH side
	E33	1	10,000	Front clevis RH side
	C1	1	10,000	Rear clevis LH side
	Aft ramp			
17	E1	1	10,000	Rear clevis RH side
	Aft ramp			
	C4	1	5,000	Axle RH side
	Aft ramp			
	E4	1	5,000	Axle LH side
18	Aft ramp			
	E33	1	10,000	Front clevis LH side
	G33	1	10,000	Front clevis RH side
	E1	1	10,000	Rear clevis LH side
	Aft ramp			
19	G1	1	10,000	Rear clevis RH side
	Aft ramp			
	E5	1	5,000	Axle LH side
	Aft ramp			
	F5	1	5,000	Axle RH side
	Aft ramp			

Section XX. LOAD 2-20: TWO SEMITRAILER, STAKE 12-TON M127A1; TWO SEMITRAILER, VAN, 6-TON M119; ONE TRUCK, TRACTOR, 5-TON W / WN M52A2; ONE TRUCK, CARGO, 2½-TON M35A2; ONE TRUCK, VAN SHOP 2½-TON M109A2; ONE TRUCK, CARGO ¾-TON M37B1; one trailer, cargo 1½-TON M105A2; ONE TRAILER, CARGO ¾-TON M101A1

2-153. Airplane Loading Configuration

Airplane level kneeled with aft ramp in drive-in mode.

2-154. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-155. Materiel

Eight ¾-inch thick 1-by 8-foot plywood to place a double layer under the jack pads of semitrailers.

2-156. Personnel and Duties

Four men load each vehicle into the airplane in 15 minutes. One man drives the vehicle, two men act as guides and position shoring, and the fourth man signals directions during loading and assist in positioning shoring.

2-157. Loading Instructions

a. Drive each vehicle into the cargo compartment over the aft ramp as shown in figures 2-

116 and 2-117 and park with each vehicle at the station prescribed in the tiedown diagram (fig 2-119).

b. Position the shoring under the jack pads of the semitrailers.

2-158. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 35 minutes.

b. *Procedure.* Tie down all items in accordance with the instructions in tiedown diagram (fig 2-119) and tiedown data table 2-20.

2-159. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane forward kneeled.

2-160. Offloading Instructions

a. Offload All items over forward ramp (fig 2-118).

b. Eight men offload the load in 20 minutes.

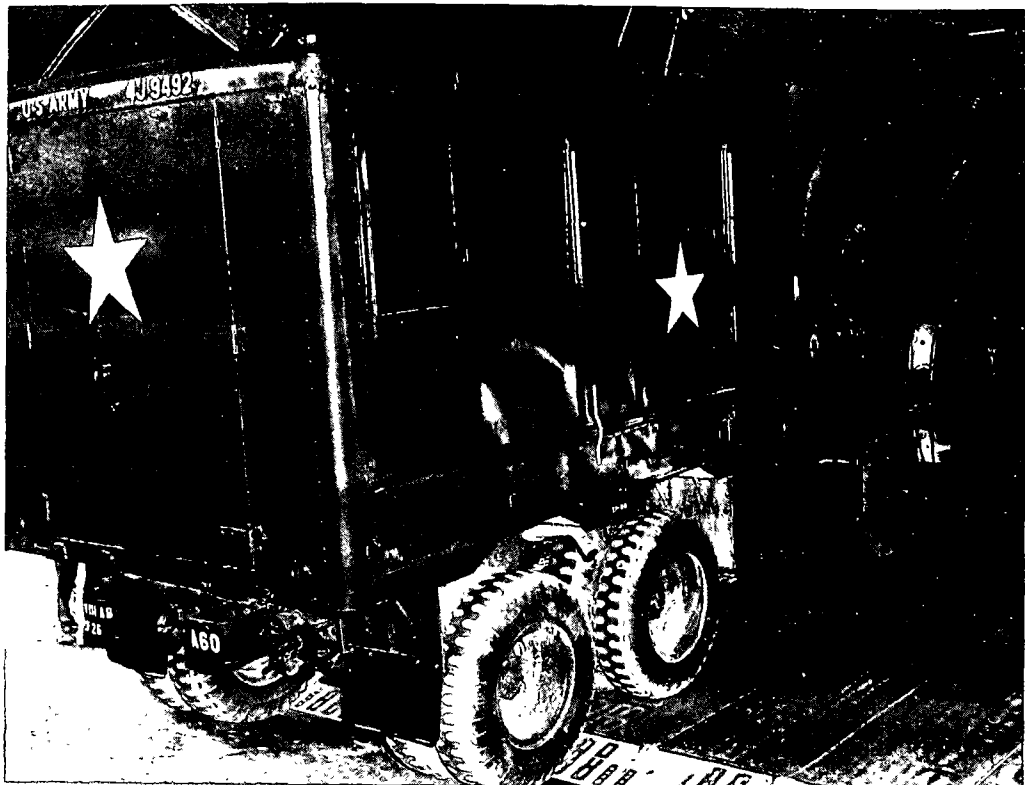


Figure 116. Loading the M109 van over the aft ramp.

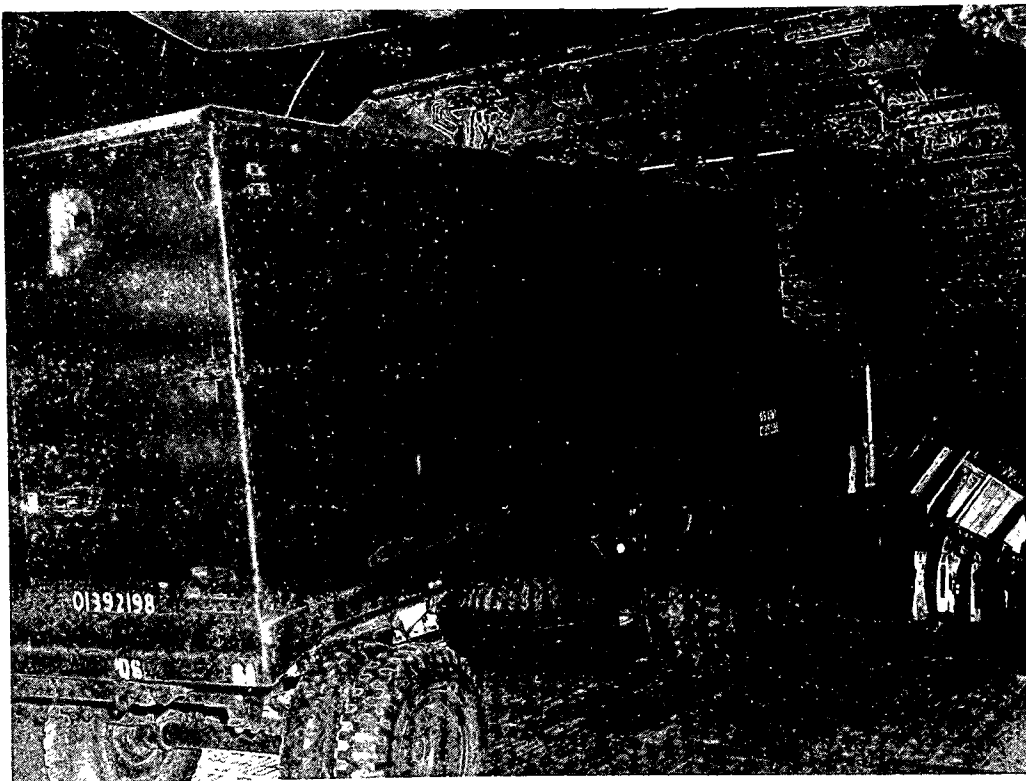


Figure 2-117. Loading the M119 van over the aft ramp.

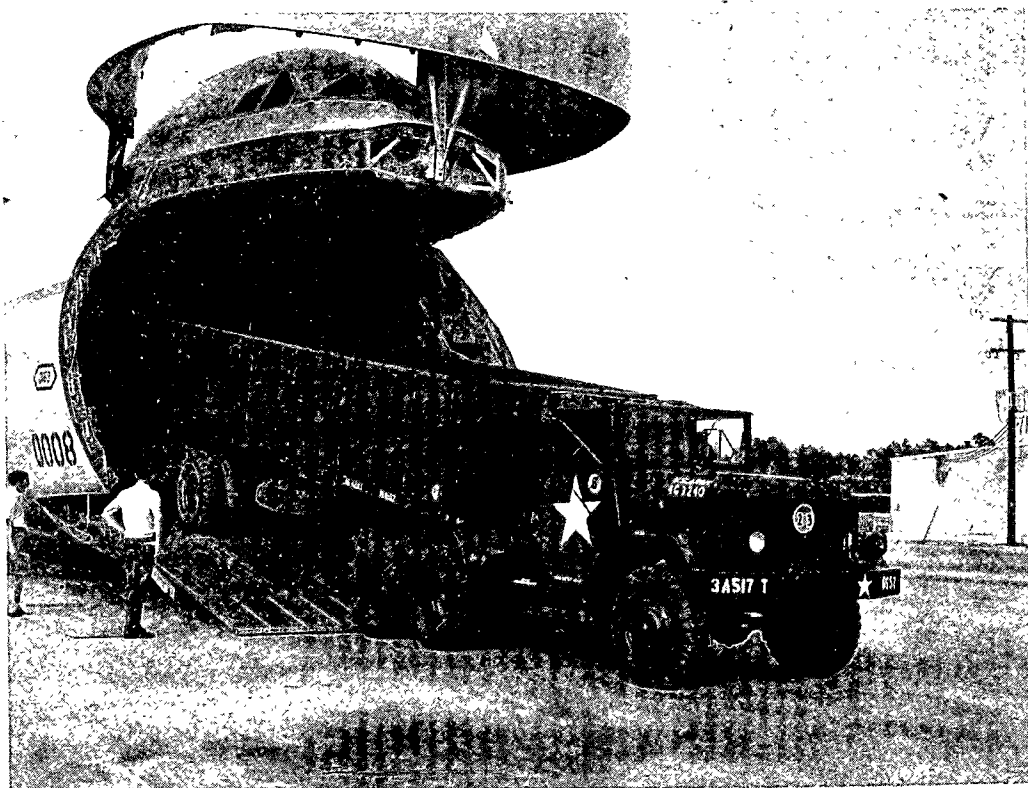
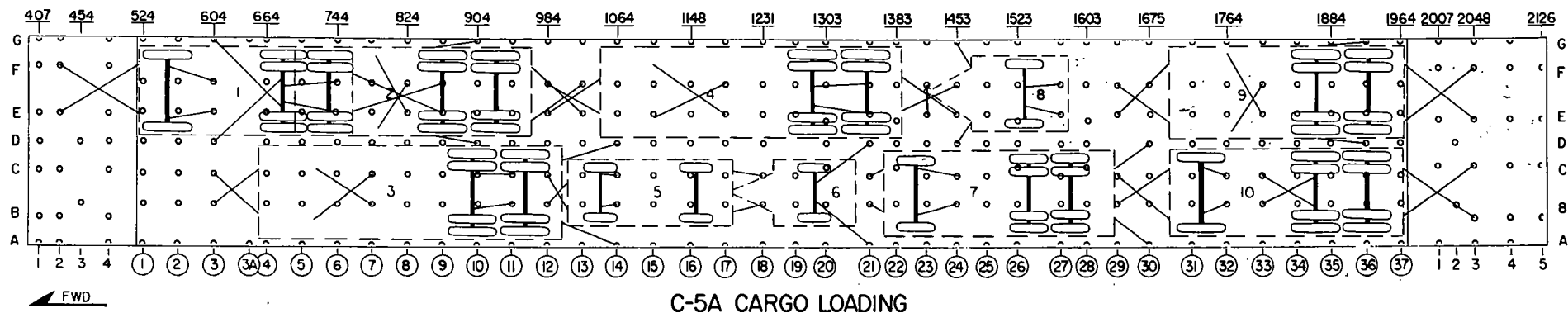


Figure 2-118. Offloading the M127 semitrailer over the forward ramp.



C-5A CARGO LOADING

LOAD 2-20

	DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
			RP	STA			
1	TRUCK, TRACTOR, 5-TON, M52A2	FWD	FRONT	520	18,740	1,770	
2	SEMITRAILER, VAN, CARGO, 6-TON, M119	FWD	REAR	975	13,930	2,403	SHORING REQUIRED
3	SEMITRAILER, STAKE, 12-TON, M127A1	FWD	REAR	1000	10,080	2,503	SHORING REQUIRED
4	SEMITRAILER, STAKE, 12-TON, M127A1	FWD	REAR	1390	10,080	2,503	SHORING REQUIRED
5	TRUCK, CARGO, 3/4-TON, WYNW M37B1	FWD	FRONT	1005	5,820	825	
6	TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	1335	1,280	519	
7	TRUCK, CARGO, 2 1/2-TON, M59A2	FWD	FRONT	1365	13,530	1,953	
8	TRAILER, CARGO, 1 1/2-TON, M105A2	FWD	REAR	1580	2,750	781	SHORING REQUIRED
9	SEMITRAILER, VAN, CARGO, 6-TON, M119	FWD	REAR	1968	13,930	2,403	SHORING REQUIRED
10	TRUCK, SHOP VAN, 2 1/2-TON, M109	FWD	REAR	1968	15,770	1,980	
TOTALS					105,910	17,380	

Figure 2-119. Tiedown diagram for load 2-20.

Table 2-20. Tiedown Data for Load 2-20

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	2E	1	25,000	Clevis at bumper RH side
	(fwd ramp)			
	2F	1	25,000	Clevis at bumper LH side
	(fwd ramp)			
	E2	1	25,000	Front axle LH side
	F2	1	25,000	Front axle RH side
	D3	2	25,000	Front rear axle RH side
	G3	2	25,000	Front rear axle LH side
	E6	1	25,000	Front rear axle LH side
	F6	1	25,000	Front rear axle RH side
2	E9	2	25,000	Rear clevis RH side
	F9	2	25,000	Rear clevis LH side
	E8	1	25,000	Frame RH side
	F8	1	25,000	Frame LH side
	D10	1	25,000	Side tiedown LH side
	G10	1	25,000	Side tiedown RH side
	E13	1	25,000	Rear tiedown RH side
3	F13	1	25,000	Rear tiedown LH side
	B3	1	25,000	Front tiedown RH side
	C3	1	25,000	Front tiedown LH side
	B7	1	25,000	Tiedown at support RH side
	C7	1	25,000	Tiedown at support LH side
	B11	1	25,000	Front axle LH side
	C11	1	25,000	Front axle RH side
	A14	1	25,000	Rear tiedown ring LH side
4	D14	1	25,000	Rear tiedown ring RH side
	E12	1	25,000	Front tiedown RH side
	F12	1	25,000	Front tiedown LH side
	E17	1	25,000	Tiedown at support RH side
	F17	1	25,000	Tiedown at support LH side
	E22	1	25,000	Front axle LH side
	F22	1	25,000	Front axle RH side
	E24	1	25,000	Rear tiedown ring RH side
5	F24	1	25,000	Rear tiedown ring LH side
	B12	1	10,000	Clevis at bumper RH side
	C12	1	10,000	Clevis at bumper LH side
	B14	1	10,000	Front axle LH side
	C14	1	10,000	Front axle RH side
	B18	1	10,000	Clevis at bumperette LH side
6	C18	1	10,000	Clevis at bumperette RH side
	A21	1	10,000	Axle LH side
7	D21	1	10,000	Axle RH side
	B21	1	25,000	Clevis at bumper LH side
8	C21	1	25,000	Clevis at bumper RH side
	B24	1	25,000	Front axle LH side
	C24	1	25,000	Front axle RH side
	A30	1	25,000	Clevis at bumperette LH side
	D30	1	25,000	Clevis at bumperette RH side
	E23 / F23	1	5,000	Across lunette
9	D24	1	10,000	Frame at lunette LH side
	G24	1	10,000	Frame at lunette RH side
	E27	1	10,000	Axle LH side
	F27	1	10,000	Axle RH side
	E29	1	25,000	Tiedown point RH side
9	F29	1	25,000	Tiedown point LH side
	E33	1	25,000	Frame RH side
	F33	1	25,000	Frame LH side

Table 2-20—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
9	D36	1	25,000	Side tiedown LH side
	G36	1	25,000	Side tiedown RH side
	E3	1	25,000	Rear tiedown RH side
	(aft ramp)			
10	F3	1	25,000	Rear tiedown LH side
	(aft ramp)			
	B29	1	25,000	Clevis at bumper RH side
	C29	1	25,000	Clevis at bumper LH side
	B32	1	25,000	Front axle LH side
	C32	1	25,000	Front axle RH side
	B33	1	25,000	Front rear axle RH side
	C33	1	25,000	Front rear axle LH side
	B3	1	25,000	Rear tiedown RH side
	(aft ramp)			
	C3	1	25,000	Rear tiedown LH side
	(aft ramp)			

Section XXI. LOAD 2-21: FOUR HELICOPTER, UTILITY UH-1H; THREE HELICOPTER, UTILITY UH-1D (FIG 2-120)



Figure 2-120. Helicopter lineup for load 2-21.

2-161. Airplane Loading Configuration

Airplane forward kneeled and forward ramp in drive-in mode.

2-162. Preparing the Items

Prepare the helicopters in accordance with procedures in paragraph 2-66, Load 2-9.

2-163. Materiel

See paragraph 2-67, load 2-9, for materiel requirements.

2-164. Personnel and Duties

See paragraph 2-68, load 2-9, for duties of personnel.

2-165. Loading Instructions

See paragraph 2-69, load 2-9, for loading instructions.

2-166. Tiedown (See Caution in Paragraph 1-9 c)

a. Materiel.

(1) Minimum of 147 CGU-1B tiedown devices are required for tiedown of the helicopters.

(2) Fourteen pieces of ½- by 12- by 30-inch felt sheeting, used under the tiedown straps where they are wrapped around the rotor blades.

(3) Twenty-eight pieces of ½- by 12- by 18-inch sheeting, used under the tiedown straps at the end of the tiedown beams.

b. Personnel and Time. Eight men tie down one UH-1 helicopter in 15 minutes.

c. Procedure.

(1) Position two tiedown beams across the floor of each helicopter cargo compartment as shown in figure 2-121.

(2) Tie down the helicopters in accordance with the instructions in tiedown data table 2-21, tiedown diagram (fig 2-122), and figures 2-123 through 2-126.

(3) Place one sheet of 12- by 30-inch felt under each tiedown strap where it is wrapped around a rotor blade. Place on sheet of 12-by 18-inch felt under each tiedown strap where the strap passes over the end of the tiedown beam.

2-167. Airplane Offloading Configuration

Airplane forward kneeled and forward ramp in drive-off mode.

2-168. Offloading Instructions

a. Materiel.

(1) A minimum of two sets of ground handling wheels.

(2) Three MB-1 tiedown chains for the towing bridle.

(3) Eight pieces of 2- by 12-inch by 16-foot lumber to be positioned at the forward ramp toes to form a ramp-toe extension.

b. Personnel and Time. Eight men install the

ground handling wheels and towing bridle, and offload one helicopter in 15 minutes.

c. Procedure. Offloading is the reverse of loading, except the winch is used for braking the helicopter as it is manhandled down the ramp. A lumber ramp-toe extension is required. Remove parking shoring from the airplane as each helicopter is offloaded.

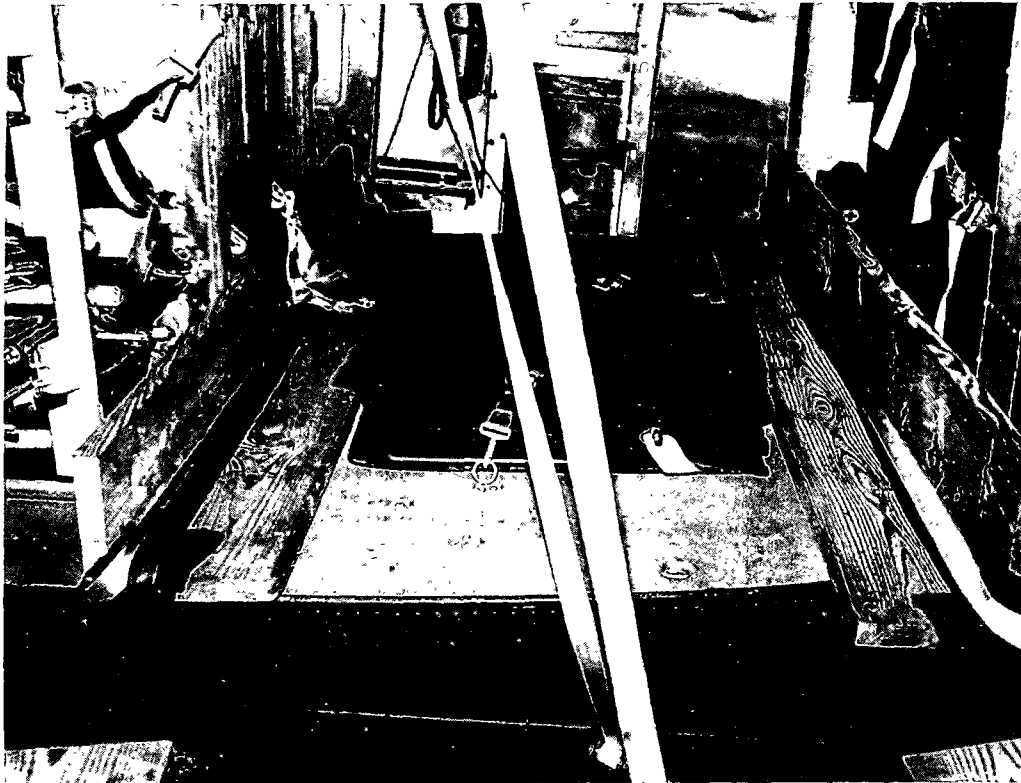
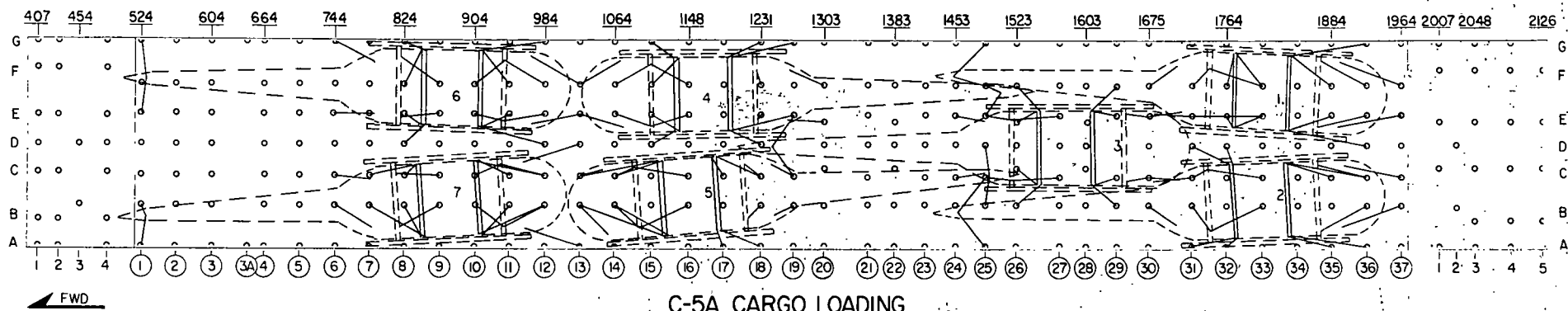


Figure 2-121. Tiedown of the UH-1 helicopter. Note the construction and positioning of the tiedown beams, the felt sheets at the end of the beams, and method of tiedown of the synchronized elevator.



C-5A CARGO LOADING

LOAD 2-21

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUFE	REMARKS
		RP	STA			
1 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1,440	6,500	9,066	SHORING REQUIRED
2 HELICOPTER, UTILITY, UH-1H	AFT	TAIL	1,443	6,500	9,066	SHORING REQUIRED
3 HELICOPTER, UTILITY, UH-1D	AFT	TAIL	1,215	6,250	9,066	SHORING REQUIRED
4 HELICOPTER, UTILITY, UH-1H	FWD	TAIL	1,555	6,500	9,066	SHORING REQUIRED
5 HELICOPTER, UTILITY, UH-1H	FWD	TAIL	1,555	6,500	9,066	SHORING REQUIRED
6 HELICOPTER, UTILITY, UH-1D	AFT	TAIL	510	6,250	9,066	SHORING REQUIRED
7 HELICOPTER, UTILITY, UH-1D	AFT	TAIL	530	6,250	9,066	SHORING REQUIRED
TOTALS				44,750	63,462	

Figure 2-122. Tiedown diagram for load 2-21.

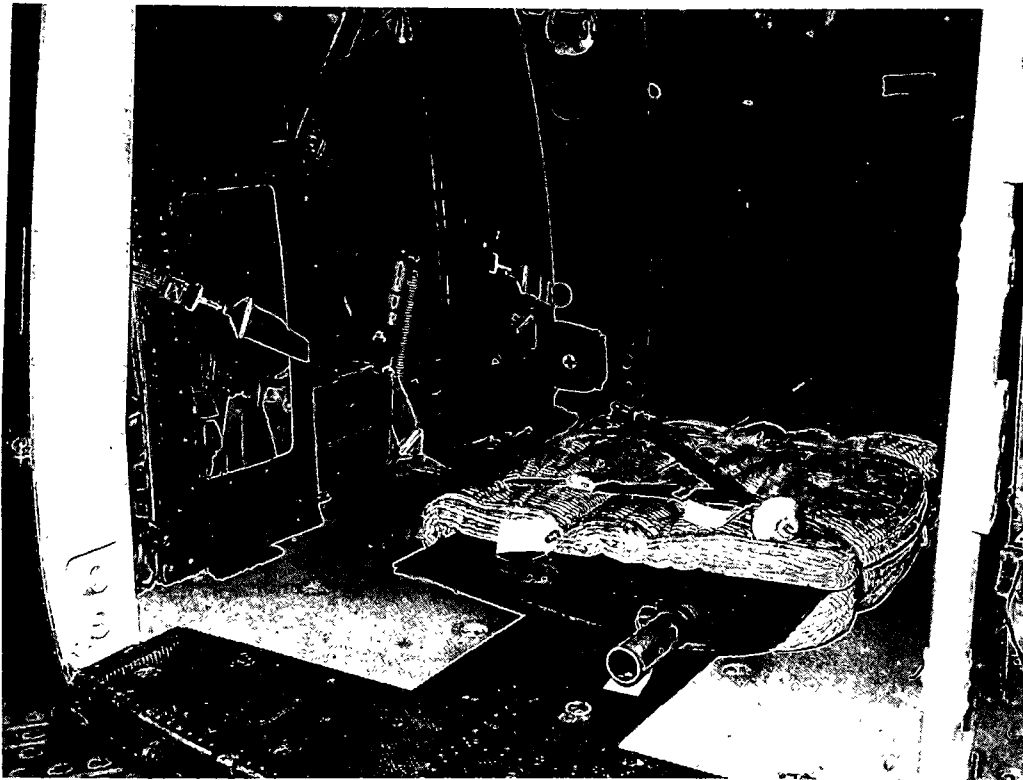


Figure 2-123. Stowage and tiedown of the forward cargo doors, one synchronized elevator, and one stabilizer bar. Note the felt sheet and mattress used for cushioning.



Figure 2-124. Stowage and tiedown of the forward cargo doors, two synchronized elevators, and FM whip antenna. Note the felt sheet and mattress used for cushioning.

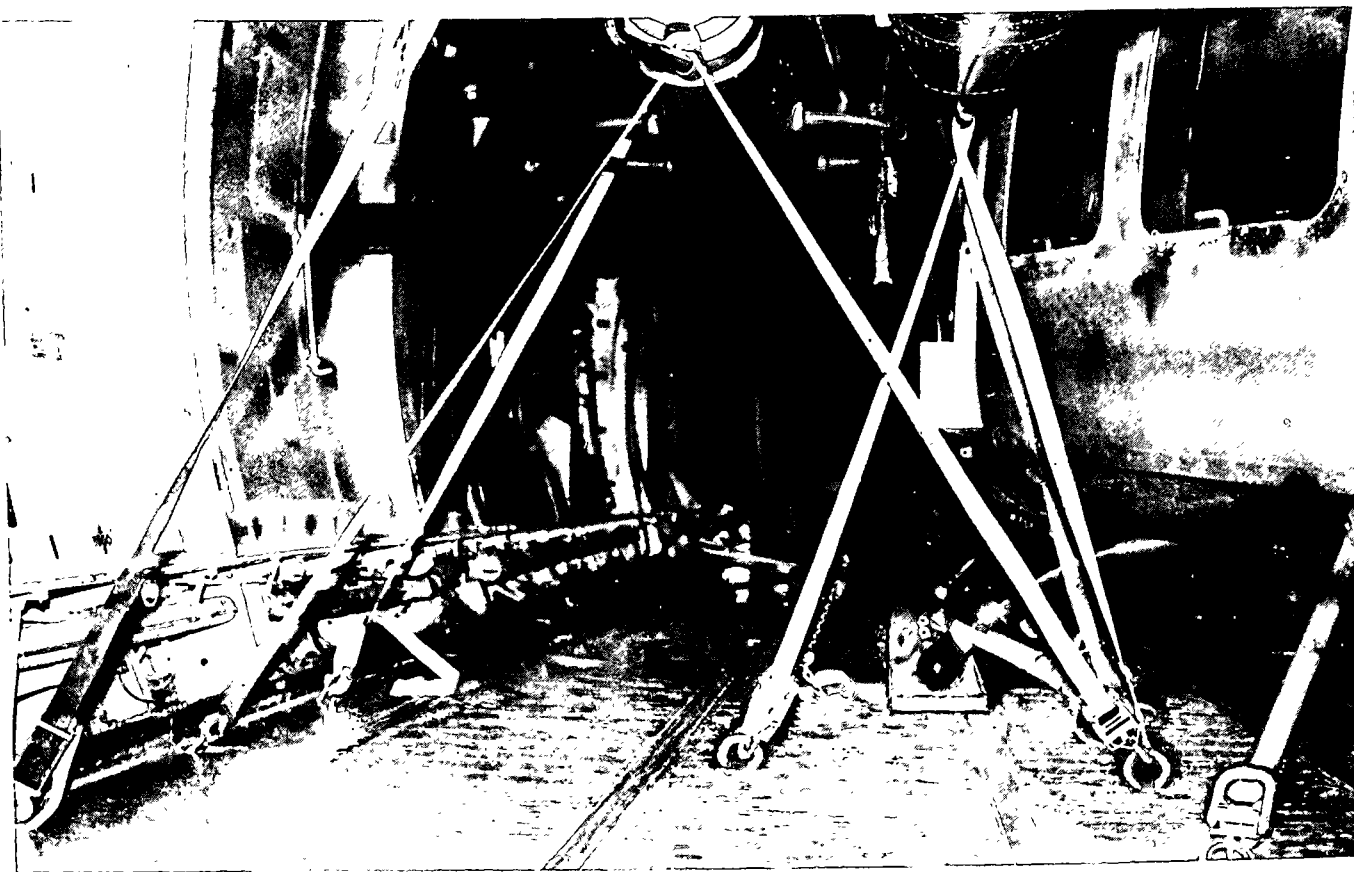


Figure 2-125. Tiedown of the UH-1.

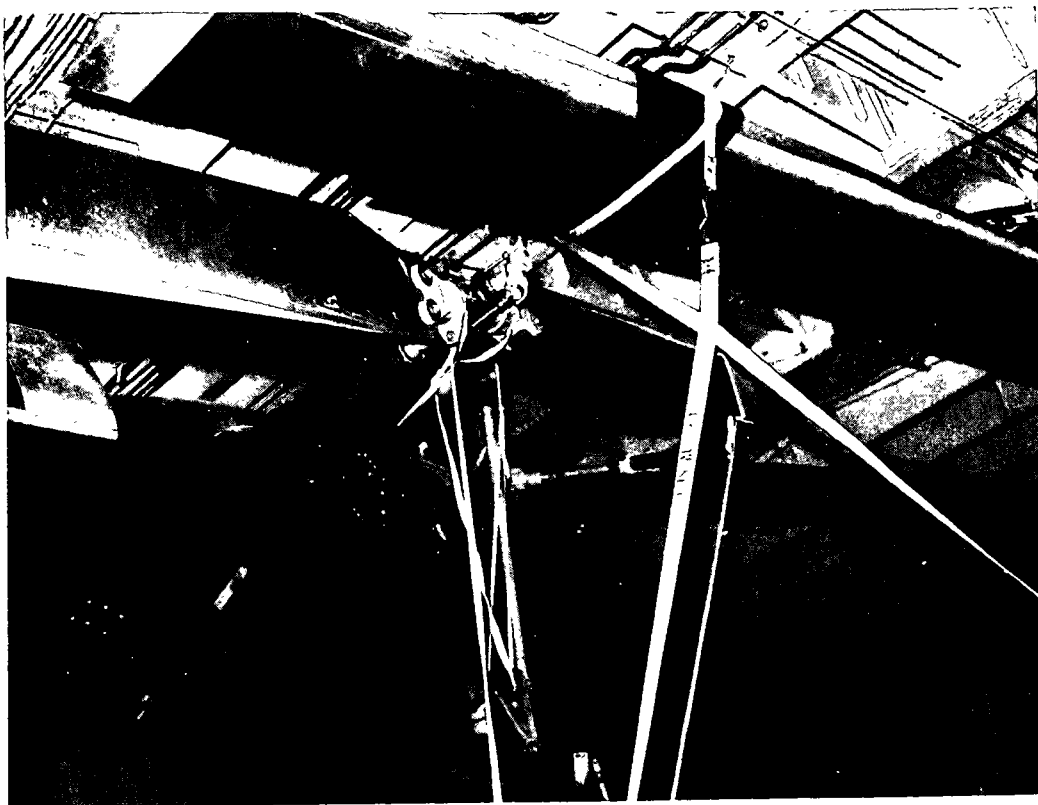


Figure 2-126. Tiedown of the UH-1. Note the felt sheet under the tiedown straps wrapped around the rotor blades.

Table 2-21. Tiedown Data for Load 2-21

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E36	1	5,000	Front cross tube RH side
	F36	1	5,000	Front cross tube LH side
	E31 / E33	1	5,000	Rear cross tube RH side
	F31 / F33	1	5,000	Rear cross tube LH side
	E37	1	5,000	Front mooring ring RH side
	F37	1	5,000	Front mooring ring LH side
	E30	1	5,000	Rear mooring ring RH side
	F30	1	5,000	Rear mooring ring LH side
	E32 / F32	2	5,000	Through cargo compartment
	E33 / F33	2	5,000	Through cargo compartment
	E35 / F35	2	5,000	Through cargo compartment
	D36 / G36	2	5,000	Through cargo compartment
	E37 / G37	2	5,000	Around front rotor blade
	E26 / G26	2	5,000	Around rear rotor blade
	E25 / F25	1	5,000	Around tail skid
2	B36	1	5,000	Front cross tube RH side
	C36	1	5,000	Front cross tube LH side
	B31 / B33	1	5,000	Rear cross tube RH side
	C31 / C33	1	5,000	Rear cross tube LH side
	B37	1	5,000	Front mooring ring RH side
	C37	1	5,000	Front mooring ring LH side
	B30	1	5,000	Rear mooring ring RH side
	C30	1	5,000	Rear mooring ring LH side
	A32 / C32	2	5,000	Through cargo compartment
	A33 / C33	2	5,000	Through cargo compartment
	A35 / C35	2	5,000	Through cargo compartment
	A36 / C36	2	5,000	Through cargo compartment
	A37 / C37	2	5,000	Around front rotor blade
	A28 / C25	2	5,000	Around rear rotor blade
	A25 / C25	1	5,000	Around tail skid
3	C30	1	5,000	Front cross tube RH side
	E30	1	5,000	Front cross tube LH side
	C26 / 27	1	5,000	Rear cross tube RH side
	E26 / 27	1	5,000	Rear cross tube LH side
	C31	1	5,000	Front mooring ring RH side
	E31	1	5,000	Front mooring ring LH side
	C24	1	5,000	Rear mooring ring RH side
	E24	1	5,000	Rear mooring ring LH side
	B29 / F29	2	5,000	Through cargo compartment
	C29 / E29	2	5,000	Through cargo compartment
	B26 / F26	2	5,000	Through cargo compartment
	C26 / E26	2	5,000	Through cargo compartment
	C / E34	2	5,000	Around front rotor blade
	C20 / G21	2	5,000	Around rear rotor blade
	C / E28	1	5,000	Around tail skid
4	F14 / F16	1	5,000	Front cross tube RH side
	E14 / E16	1	5,000	Front cross tube LH side
	F18	1	5,000	Rear cross tube RH side
	E18	1	5,000	Rear cross tube LH side
	F13	1	5,000	Front mooring ring RH side
	E13	1	5,000	Front mooring ring LH side
	F18	1	5,000	Rear mooring ring RH side
	E18	1	5,000	Rear mooring ring LH side
	E13 / F13	2	5,000	Through cargo compartment
	E14 / F14	2	5,000	Through cargo compartment
	E17 / G17	2	5,000	Through cargo compartment
	E18 / G18	2	5,000	Through cargo compartment
	D11 / G11	2	5,000	Around front rotor blade
	D23 / D24	2	5,000	Around rear rotor blade
	E25 / F25	1	5,000	Around tail skid

Table 2-21—Continued.

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
5	B14 / B16	1	5,000	Front cross tube LH side
	C14 / C16	1	5,000	Front cross tube RH side
	B18	1	5,000	Rear cross tube LH side
	C18	1	5,000	Rear cross tube RH side
	B13	1	5,000	Front mooring ring LH side
	C13	1	5,000	Front mooring ring RH side
	B18	1	5,000	Rear mooring ring LH side
	C18	1	5,000	Rear mooring ring RH side
	B13 / C13	2	5,000	Through cargo compartment
	B14 / C14	2	5,000	Through cargo compartment
	A17 / C17	2	5,000	Through cargo compartment
	A18 / C18	2	5,000	Through cargo compartment
	Ring On			
	Skid Tube	2	5,000	Around front rotor blade
	A24 / D23	2	5,000	Around rear rotor blade
	B25 / C25	1	5,000	Around tail skid
6	E10 / E12	1	5,000	Front cross tube RH side
	F10 / F12	1	5,000	Front cross tube LH side
	E11	1	5,000	Rear cross tube RH side
	F11	1	5,000	Rear cross tube LH side
	E13	1	5,000	Front mooring ring RH side
	F13	1	5,000	Front mooring ring LH side
	E7	1	5,000	Rear mooring ring RH side
	F7	1	5,000	Rear mooring ring LH side
	E8 / F18	2	5,000	Through cargo compartment
	E9 / F9	2	5,000	Through cargo compartment
	E11 / F11	2	5,000	Through cargo compartment
	E12 / F12	2	5,000	Through cargo compartment
	D14 / G14	2	5,000	Around front rotor blade
	D3 / F3	2	5,000	Around rear rotor blade
	E1 / F1	1	5,000	Around tail skid
7	C10 / C12	1	5,000	Front cross tube LH side
	B10 / B12	1	5,000	Rear cross tube LH side
	C11	1	5,000	Rear cross tube LH side
	B11	1	5,000	Rear cross tube RH side
	C13	1	5,000	Front mooring ring LH side
	B13	1	5,000	Front mooring ring RH side
	C7	1	5,000	Rear mooring ring LH side
	B7	1	5,000	Rear mooring ring RH side
	B8 / C8	2	5,000	Through cargo compartment
	B9 / C9	2	5,000	Through cargo compartment
	B11 / C11	2	5,000	Through cargo compartment
	B12 / C12	2	5,000	Through cargo compartment
	Ring On			
	Skid Tube	2	5,000	Around front rotor blade
	A3 / C3	2	5,000	Around rear rotor blade
	B1 / C1	1	5,000	Around tail skid

Section XXII. LOAD 2-22: ONE TRUCK, VAN SHOP 2½-TON M109; ONE TRUCK, WRECKER 5-TON M543A2; ONE TRUCK, CARGO 5-TON XLWB M-55; ONE TRUCK, CARGO 2½-TON M35A2; ONE TRAILER, CARGO 1½-TON M105A2; THREE TRUCK, AMBULANCE ¼-TON M718 (FIG 2-127)

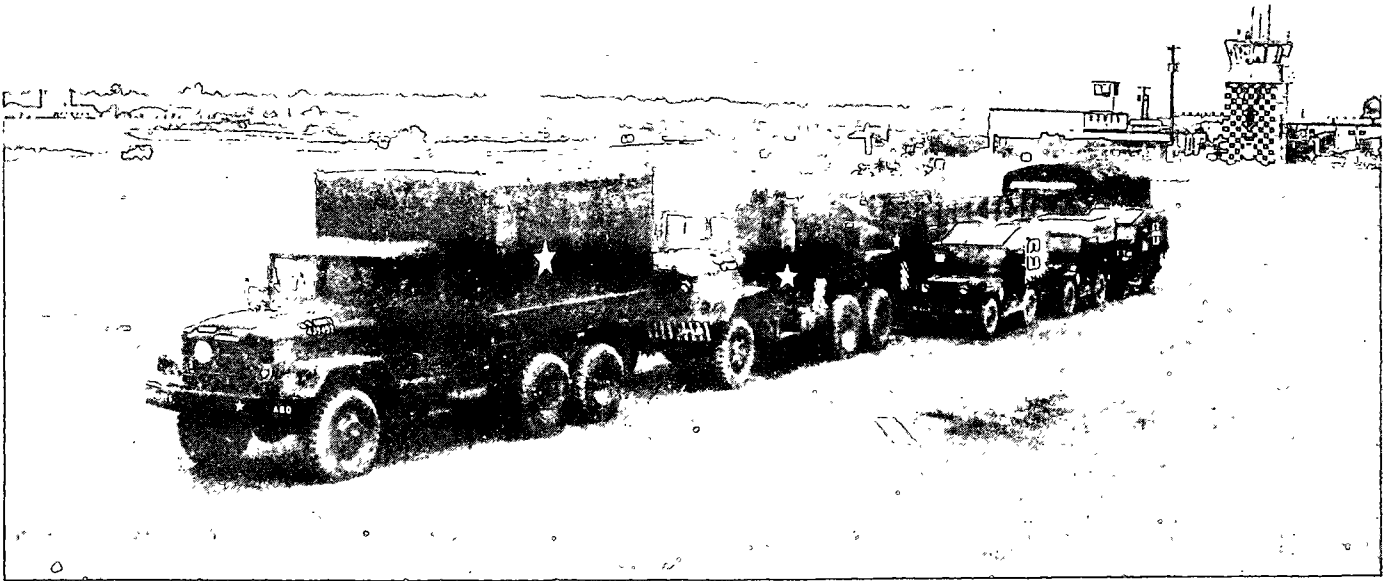


Figure 2-127. Vehicle lineup for load 2-22.

2-169. Airplane Loading Configuration

Airplane level kneeled with aft ramp in drive-in mode.

2-170. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-171. Materiel

None.

2-172. Personnel and Duties

Fourteen men load all vehicles into the airplane in 7 minutes. One man drives the vehicle and one man signals directions during loading.

2-173. Loading Instructions

Drive each vehicle into the cargo compartment over

the aft ramp and park each vehicle at station prescribed in the tiedown diagram (fig 2-128).

2-174. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

b. *Procedure.* Tie down the items in accordance with the instructions in tiedown data table 2-22 and tiedown diagram (fig 2-128).

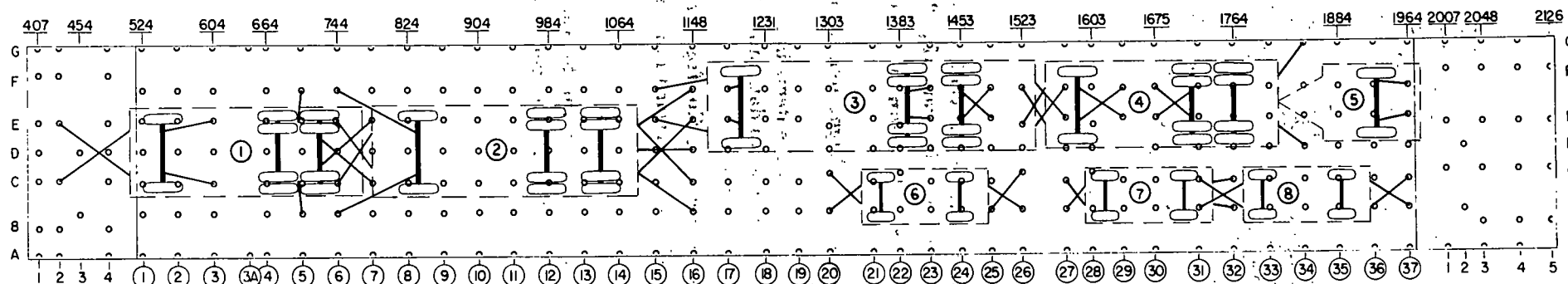
2-175. Airplane Offloading Configuration

Airplane level kneeled with forward ramp in drive-off mode.

2-176. Offloading

a. Offload the vehicles over the forward ramp.

b. Fourteen men offload all vehicles in 7 minutes.



C-5A CARGO LOADING

LOAD 2-22

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP	WEIGHT	CUBE	REMARKS
1. TRUCK, SHOP VAN, 2 1/2-TON M109	FWD	FRONT 510	15,770	1,980	
2. TRUCK, WRECKER, MED 5-TON M643A2	FWD	FRONT 185	34,280	2,256	
3. TRUCK, CARGO, 5-TON M100 M5	FWD	FRONT 1165	25,150	2,515	
4. TRUCK, CARGO, 2 1/2-TON M100 M5A2	FWD	FRONT 1560	13,530	1,693	
5. TRAILER, CARGO, 1 1/2-TON M105A2	FWD	REAR 1980	2,750	781	
6. TRUCK, AMBULANCE, 1/4-TON M718	FWD	FRONT 1340	2,780	500	
7. TRUCK, AMBULANCE, 1/4-TON M718	FWD	FRONT 1595	2,780	500	
8. TRUCK, AMBULANCE, 1/4-TON M718	FWD	FRONT 1775	2,780	500	
TOTALS			99,820	10,725	

Figure 2-128. Tiedown diagram for load 2-22.

Tat			2. Tiedown Data for Load 2-22	
Item No.	Tiedown fitting	T. Quan	Device Size	Attach to item at:
1	C2 (fwd ramp)	1	25,000	Clevis at bumper RH side
	E2 (fwd ramp)	1	25,000	Clevis at bumper LH side
	C3	1	25,000	Front axle LH side
	E3	1	25,000	Front axle RH side
	B5	1	25,000	Lifting point above rear springs LH side
	F5	1	25,000	Lifting point above rear springs RH side
	C7	1	25,000	Rear axle RH side
	E7	1	25,000	Rear axle LH side
2	C6	1	25,000	Clevis at bumper RH side
	E6	1	25,000	Clevis at bumper LH side
	B6	1	25,000	Front axle LH side
	F6	1	25,000	Front axle RH side
	B16	1	25,000	Rear clevis LH side
	F16	1	25,000	Rear clevis RH side
	C16	1	25,000	Rear clevis RH side
	E16	1	25,000	Rear clevis RH side
3	D16	1	25,000	Pintle hook
	E15	1	25,000	Clevis at bumper LH side
	F15	1	25,000	Clevis at bumper RH side
	E17	1	25,000	Front axle LH side
	F17	1	25,000	Front axle RH side
	E23	1	25,000	Front rear axle LH side
	F23	1	25,000	Front rear axle RH side
	E25	1	25,000	Rear axle RH side
4	F25	1	25,000	Rear axle LH side
	E27	1	25,000	Clevis at bumperette RH side
	F27	1	25,000	Clevis at bumperette LH side
	E26	1	25,000	Clevis at bumper RH side
	F26	1	25,000	Clevis at bumper LH side
	E29	1	25,000	Front axle RH side
	F29	1	25,000	Front axle LH side
	E30	1	25,000	Front rear axle RH side
5	F30	1	25,000	Front rear axle LH side
	D34	1	25,000	Clevis at bumperette LH side
	G34	1	25,000	Clevis at bumperette RH side
	E37	1	10,000	Axle LH side
	F37	1	10,000	Axle RH side
	B20	1	10,000	Clevis at bumper RH side
	C20	1	10,000	Clevis at bumper LH side
	B26	1	10,000	Clevis at bumperette RH side
6	C26	1	10,000	Clevis at bumperette LH side
	B27	1	10,000	Clevis at bumper RH side
	C27	1	10,000	Clevis at bumper LH side
	B32	1	10,000	Clevis at bumperette RH side
	C32	1	10,000	Clevis at bumperette LH side
	B31	1	10,000	Clevis at bumper RH side
	C31	1	10,000	Clevis at bumper LH side
	B37	1	10,000	Clevis at bumperette RH side
7	C37	1	10,000	Clevis at bumperette LH side
8				

Section XXIII. LOAD 2-23: ONE TRUCK, CARGO, 2½-TON, M35A2; ONE TRAILER, CARGO, 1½-TON M105A2; FOUR TRUCK, CARGO, ¾-TON W / WN M37B1; FOUR TRAILER, CARGO, ¾-TON M101A1; THREE TRUCK, UTILITY, ¼-TON M151A1; THREE TRAILER, CARGO, ¼-TON M416; TWO TRUCK ¼-TON W / 106MM RR M151A1C (FIG 2-129)



Figure 2-129. Vehicle lineup for load 2-23.

2-177. Airplane Loading Configuration

Airplane level kneeled with aft ramp in drive-in mode.

2-178. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-179. Materiel

None.

2-180. Personnel and Duties

Four men load each vehicle into the airplane in 1 minute. One man drives the vehicle, two men act as guides, and the fourth man signals directions during loading.

2-181. Loading Instructions

Drive each vehicle into the cargo compartment over

the aft ramp and park with each vehicle at the station prescribed in the tiedown diagram (fig 2-130).

2-182. Tiedown (See Caution in Paragraph 1-9 c)

a. Personnel and Time. Eight men tie down the load in 30 minutes.

b. Procedures. Tie down all items in accordance with the instructions in tiedown diagram (fig 2-130), tiedown data table 2-23, and figures 2-131 through 2-133.

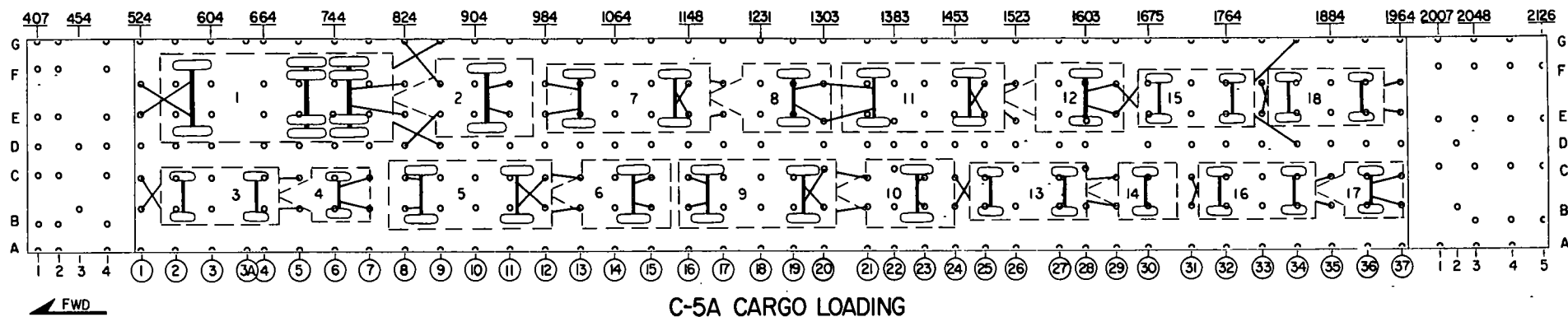
2-183. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane level kneeled.

2-184. Offloading Instructions

a. Offload all items over forward ramp.

b. Eight men offload the load in 6 minutes.



LOAD 2-23

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP RP	STA	WEIGHT	CUBE	REMARKS
1 TRUCK, CARGO, 2 1/2-TON, 6x6, W/W, M35A2	FWD	FRONT	540	13,530	1,693	
2 TRAILER, CARGO, 1 1/2-TON, M105A	FWD	FRONT	970	2,750	781	
3 TRUCK, UTILITY, 1/4-TON, 4x4, M51A1	FWD	FRONT	540	2,350	370	
4 TRAILER, CARGO, 1/4-TON, M416	FWD	REAR	780	590	170	
5 TRUCK, CARGO, 3/4-TON, 4x4, W/W, M37B1	FWD	FRONT	800	5,820	846	
6 TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	1,130	1,280	519	
7 TRUCK, CARGO, 3/4-TON, 4x4, W/W, M37B1	FWD	FRONT	985	5,820	846	
8 TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	1,315	1,280	519	
9 TRUCK, CARGO, 3/4-TON, 4x4, W/W, M37B1	FWD	FRONT	1,140	5,880	846	
10 TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	1,450	1,280	519	
11 TRUCK, CARGO, 3/4-TON, 4x4, W/W, M37B1	FWD	FRONT	1,325	5,820	846	
12 TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	1,660	1,280	519	
13 TRUCK, UTILITY, 1/4-TON, 4x4, M51A1	FWD	FRONT	1,480	2,350	370	
14 TRAILER, CARGO, 1/4-TON, M416	FWD	REAR	1,715	590	170	
15 TRUCK, UTILITY, 1/4-TON, 4x4, W/106MM, M51A1C	FWD	FRONT	1,660	3,070	404	
16 TRUCK, UTILITY, 1/4-TON, 4x4, M51A1	FWD	FRONT	1,730	2,350	370	
17 TRAILER, CARGO, 1/4-TON, M416	FWD	REAR	1,965	590	170	
18 TRUCK, UTILITY, 1/4-TON, 4x4, W/106MM, M51A1C	FWD	FRONT	1,815	3,070	404	
TOTALS				59,640	10,382	

Figure 2-130. Tiedown diagram for load 2-23.

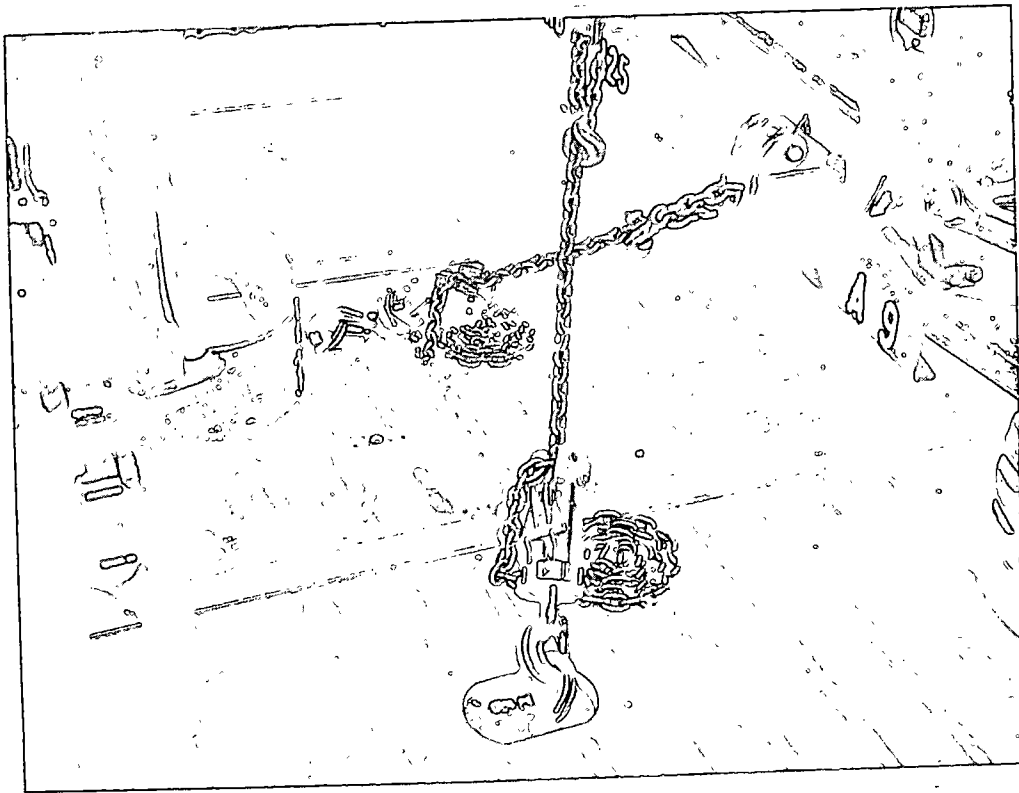


Figure 2-131. Tiedown of M151 truck.

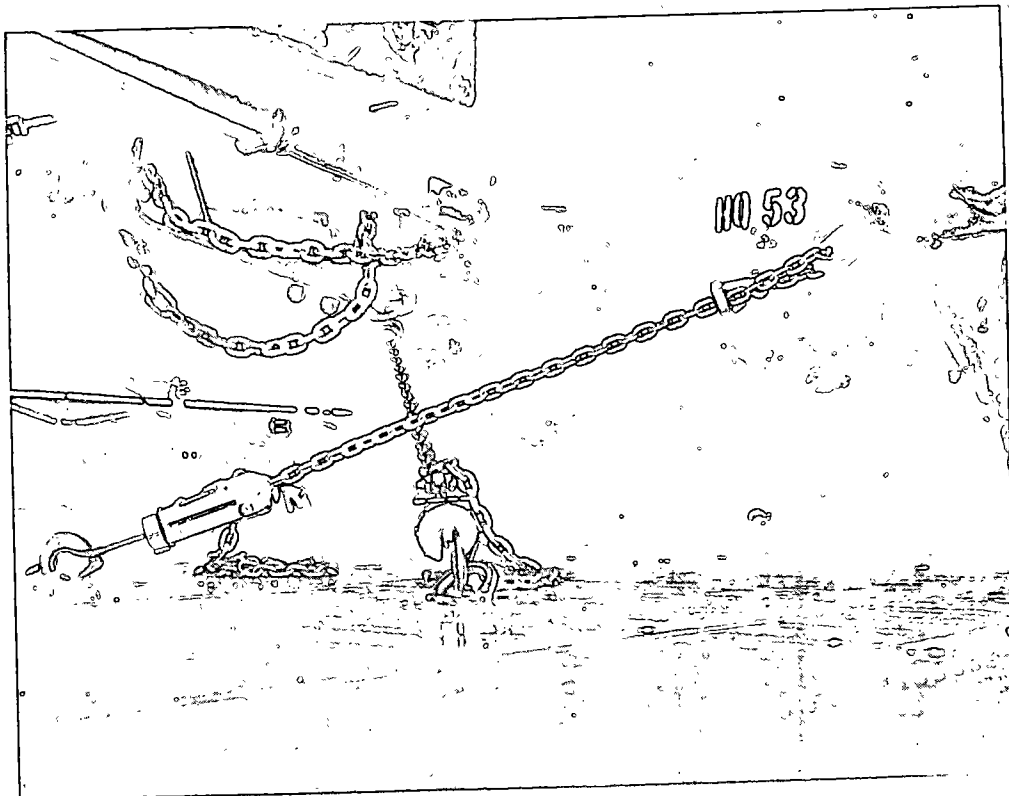


Figure 2-132. Tiedown of M151 truck.

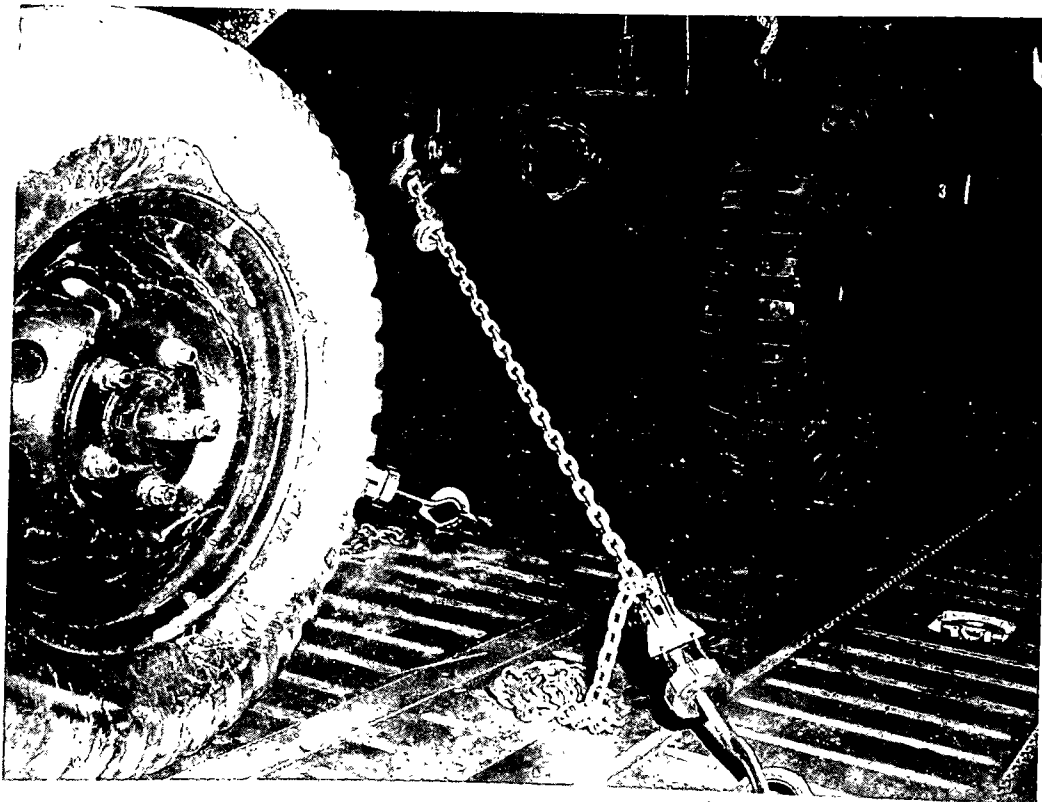


Figure 2-133. Tiedown of M105 trailer.

Table 2-23. Tiedown Data for Load 2-23

Item No.	Tiedown fitting	Quantity	Tiedown device Size	Attach to item at:
1	E1	1	25,000	Front axle RH side
	F1	1	25,000	Front axle LH side
	E8	1	25,000	Rear axle LH side
	F8	1	25,000	Rear axle RH side
	D9	1	25,000	Rear clevis LH side
	G9	1	25,000	Rear clevis RH side
2	E11	1	10,000	Axle LH side
	F11	1	10,000	Axle RH side
3	B1	1	10,000	Clevis at bumper RH side
	C1	1	10,000	Clevis at bumper LH side
	B5	1	10,000	Clevis at bumperette LH side
	C5	1	10,000	Clevis at bumperette RH side
4	B7	1	10,000	Axle LH side
	C7	1	10,000	Axle RH side
5	B8	1	10,000	Front axle LH side
	C8	1	10,000	Front axle RH side
	B12	1	10,000	Rear axle RH side
	C12	1	10,000	Rear axle LH side
	B13	1	10,000	Rear clevis LH side
	C13	1	10,000	Rear clevis RH side
6	B15	1	10,000	Axle LH side
	C15	1	10,000	Axle RH side

Table 2-23—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
7	E12	1	10,000	Front axle LH side
	F12	1	10,000	Front axle RH side
	E16	1	10,000	Rear axle RH side
	F16	1	10,000	Rear axle LH side
	E17	1	10,000	Rear clevis LH side
	F17	1	10,000	Rear clevis RH side
8	E20	1	10,000	Axle LH side
	F20	1	10,000	Axle RH side
9	B16	1	10,000	Front axle LH side
	C16	1	10,000	Front axle RH side
	B20	1	10,000	Rear axle RH side
	C20	1	10,000	Rear axle LH side
	B21	1	10,000	Rear clevis LH side
	C21	1	10,000	Rear clevis RH side
10	B23	1	10,000	Axle LH side
	C23	1	10,000	Axle RH side
11	E20	1	10,000	Front axle LH side
	F20	1	10,000	Front axle RH side
	E25	1	10,000	Rear axle RH side
	F25	1	10,000	Rear axle LH side
	E26	1	10,000	Rear clevis LH side
	F26	1	10,000	Rear clevis RH side
12	E29	1	10,000	Axle LH side
	F29	1	10,000	Axle RH side
13	B24	1	10,000	Clevis at bumper RH side
	C24	1	10,000	Clevis at bumper LH side
	B29	1	10,000	Clevis at bumperette LH side
	C29	1	10,000	Clevis at bumperette RH side
14	B30	1	10,000	Axle LH side
	C30	1	10,000	Axle RH side
15	E29	1	10,000	Clevis at bumper RH side
	F29	1	10,000	Clevis at bumper LH side
	D34	1	10,000	Clevis at bumperette LH side
	G34	1	10,000	Clevis at bumperette RH side
16	B31	1	10,000	Clevis at bumper RH side
	C31	1	10,000	Clevis at bumper LH side
	B35	1	10,000	Clevis at bumperette LH side
	C35	1	10,000	Clevis at bumperette RH side
17	B37	1	10,000	Axle LH side
	C37	1	10,000	Axle RH side
18	E33	1	10,000	Clevis at bumper RH side
	F33	1	10,000	Clevis at bumper LH side
	E37	1	10,000	Clevis at bumperette LH side
	F37	1	10,000	Clevis at bumperette RH side

Section XXIV. LOAD 2-24: ONE TRUCK, UTILITY 1/4-TON M151A1 W/ AN/ VRC-46 MOUNT-ED; ONE TRAILER, CARGO 1/4-TON M116; TWO TRUCK, TRACTOR 5-TON W/ WN M52A2; ONE SEMITRAILER, STAKE 12-TON M127A1; ONE SEMITRAILER, VAN 12-TON M128A2C; ONE TRUCK, CARGO, 2 1/2-TON M35A2; ONE TRAILER, TANK, WATER 1 1/2-TON M149; ONE TRUCK, CARGO 3/4-TON W/ WN M37B1; ONE TRAILER, CARGO 3/4-TON M101A1; ONE TOOL KIT ENGINE AND POWER TRAIN REPAIR; ONE GENERATOR SET 5KW; TWO 463L PALLET LOADED W/ EQUIPMENT (FIG 2-134)

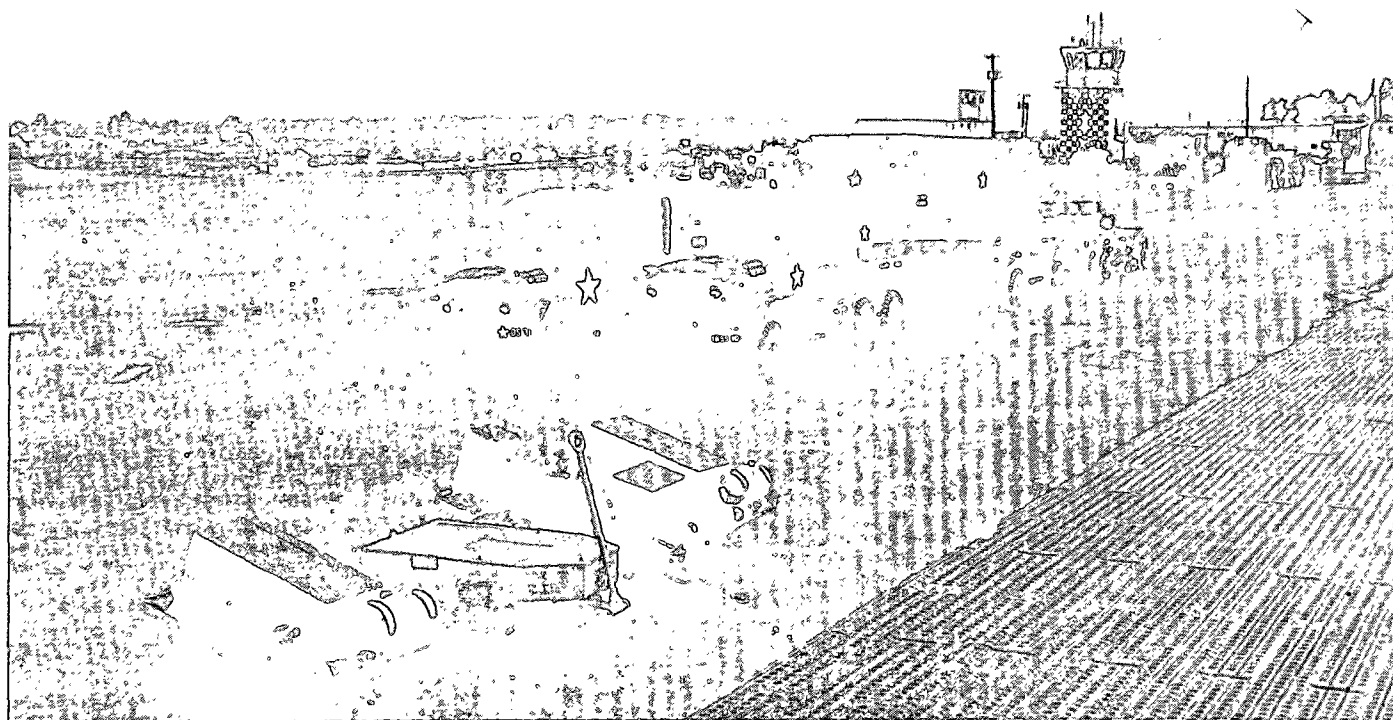


Figure 2-134. Vehicle lineup for load 2-24.

2-185. Airplane Loading Configuration

Airplane level kneed and forward ramp in drive-in mode.

2-186. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-187. Materiel

None.

2-188. Personnel and Duties

Ten men load all items into the airplane in 30 minutes. One man drives the vehicle and one man signals directions during loading. The 463L pallet loads are loaded on the forward ramp.

2-189. Loading Instructions

Drive each vehicle into the cargo compartment over the forward ramp as shown in figures 2-135 and 2-136 and park each vehicle at station prescribed in the tiedown diagram (fig 2-137). Raise the forward ramp and position the 463L pallet loads on the ramp with a forklift as shown in figure 2-138.

2-190. Tiedown (See Caution in Paragraph 1-9 c).

a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

b. *Procedures.* Tie down the items in accordance with the instructions in tiedown data table 2-24 and tiedown diagram (fig 2-137).

2-191. Airplane Offloading Configuration

Airplane level kneeled with aft ramp in drive-off mode and forward ramp at truck bed height.

2-192. Offloading Instructions

a. Offload the vehicles over the aft ramp.

b. Offload the 463L pallet loads from the forward ramp (figs. 2-139 and 2-140).

c. Ten men offload all items in 10 minutes.

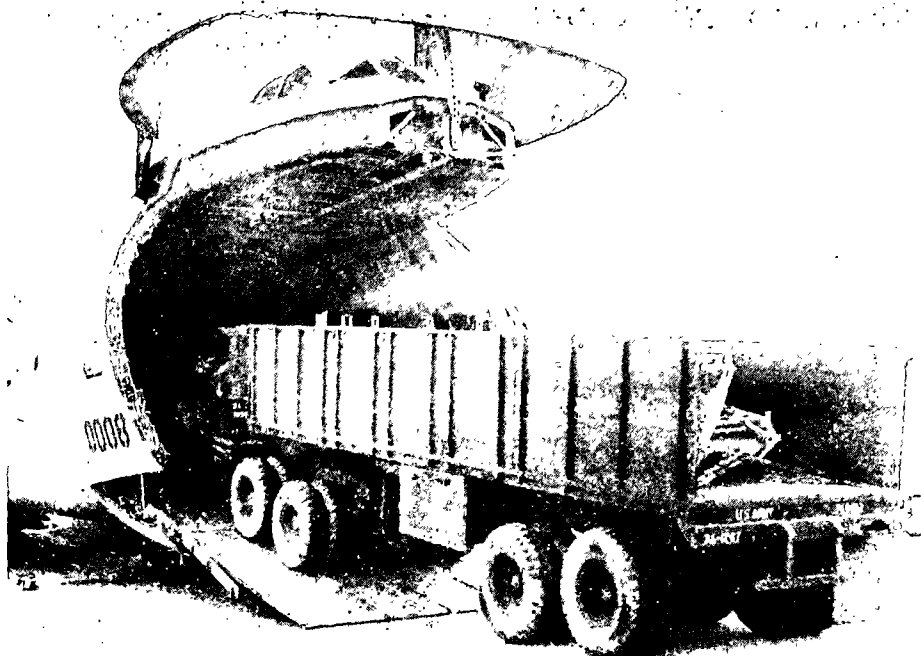


Figure 2-135. Loading the M127 semitrailer over the forward ramp.

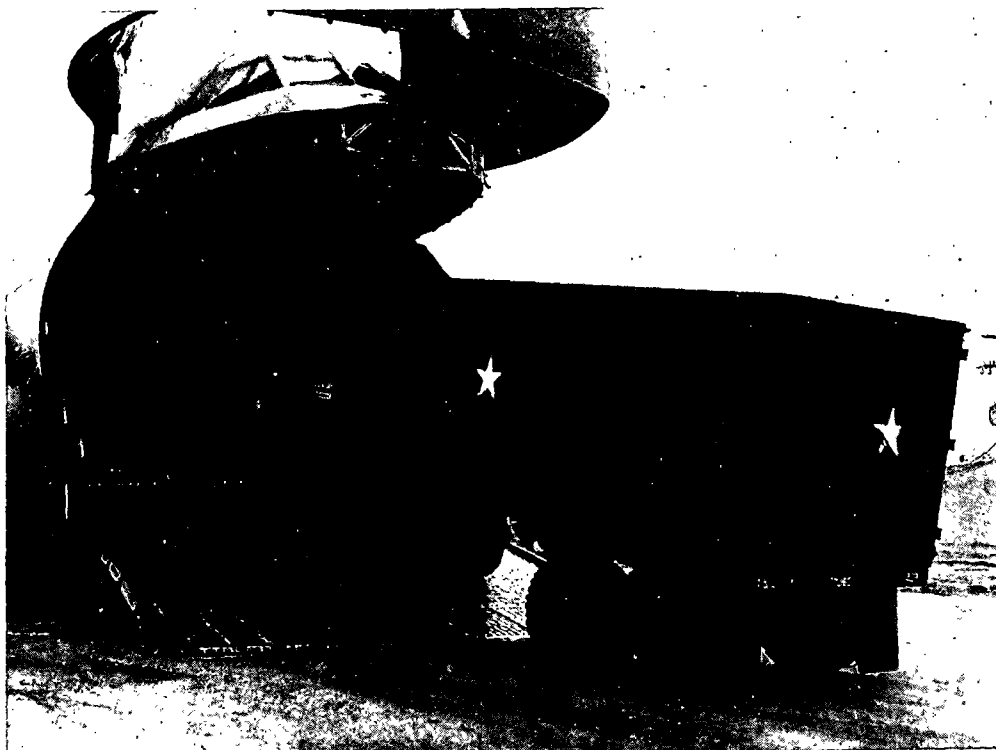
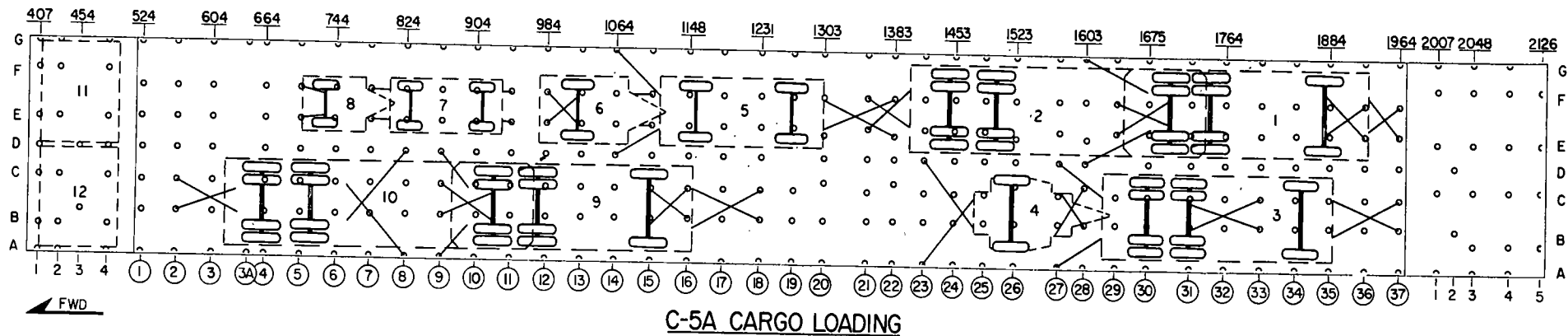


Figure 2-136. Loading the M128 van over the forward ramp.



LOAD 2-24

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP	RP	STA	WEIGHT	CUBE	REMARKS
1 TRUCK, TRACTOR, 5-TON, W/W, M52A2	AFT	FRONT	1930	18,740	1,770		
2 SEMITRAILER, STAKE, 12-TON, M127A2C	AFT	REAR	1400	10,080	2,503		
3 TRUCK, CARGO, 2 1/2-TON, M35A2	AFT	FRONT	1890	13,530	1,693		
4 TRAILER, WATER, 1 1/2-TON, M149	AFT	REAR	1475	2,410	603		
5 TRUCK, CARGO, 3/4-TON, W/W, M3781	AFT	FRONT	1300	5,820	825		
6 TRAILER, CARGO, 3/4-TON, M101A1	AFT	REAR	975	1,280	519		
7 TRUCK, UTILITY, 1/4-TON, M151A1, W/ANVRC-48 MOUNTED	AFT	FRONT	935	2,410	343		
8 TRAILER, CARGO, 1/4-TON, M416	AFT	REAR	700	590	170		
9 TRUCK, TRACTOR, 5-TON, W/W, M52A2	AFT	FRONT	1150	18,740	1,770		
10 SEMITRAILER, VAN, CARGO, 12-TON, M128A2C	AFT	REAR	620	10,650	2,899		
11 463L PALLET	-	FWD RAMP	-	6,500	300		
12 463L PALLET	-	FWD RAMP	-	6,500	300		
TOTALS				97,250	13,665		

Figure 2-137. Tiedown diagram for load 2-24.

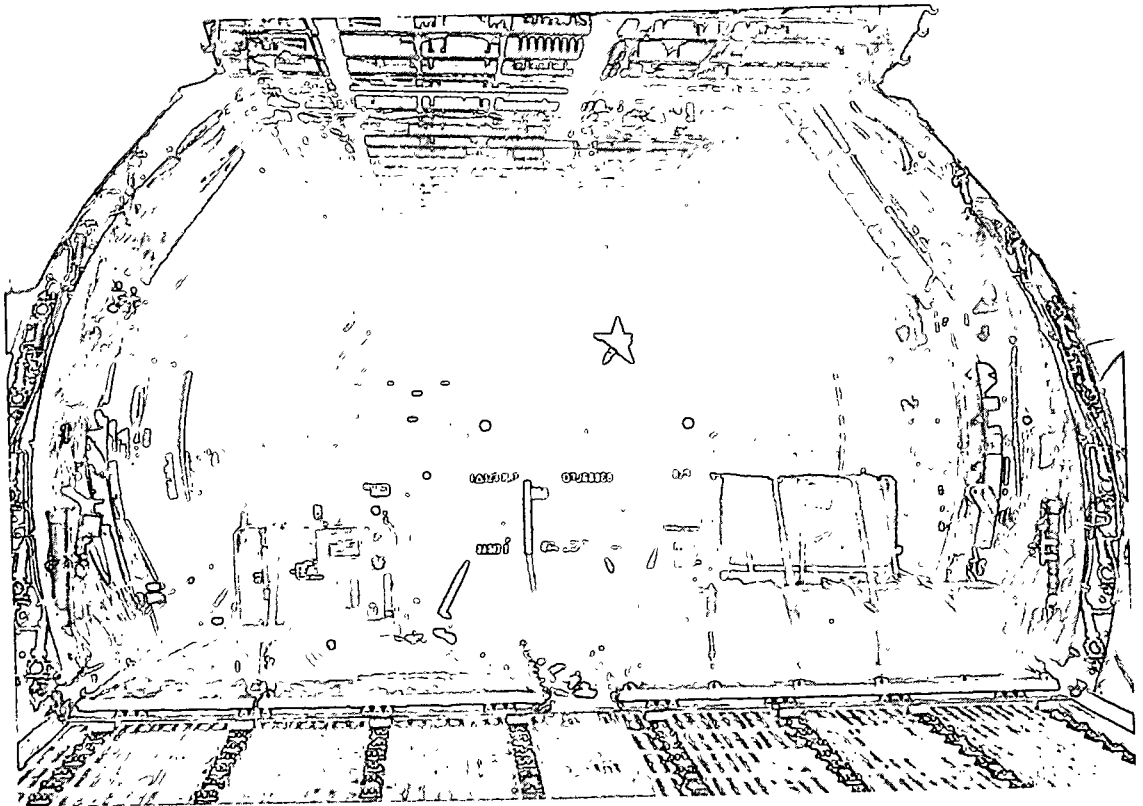


Figure 2-138. Positioning of 463L pallet loads on forward ramp.

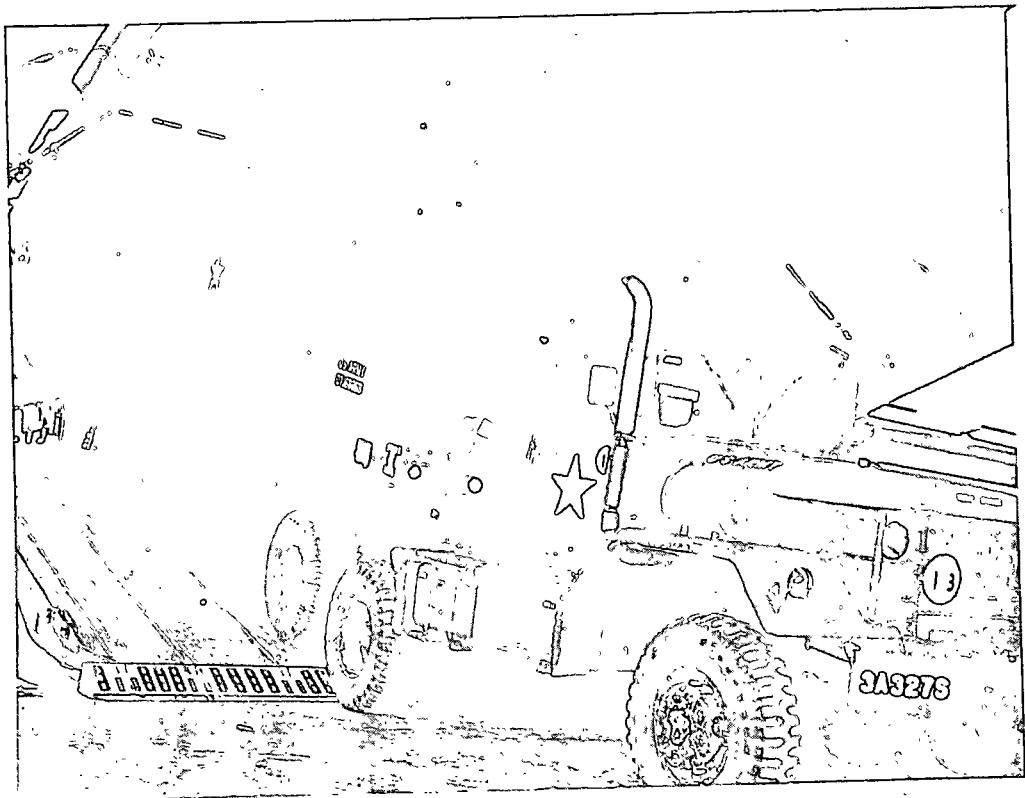


Figure 2-139. Offloading the M128 van over the aft ramp.

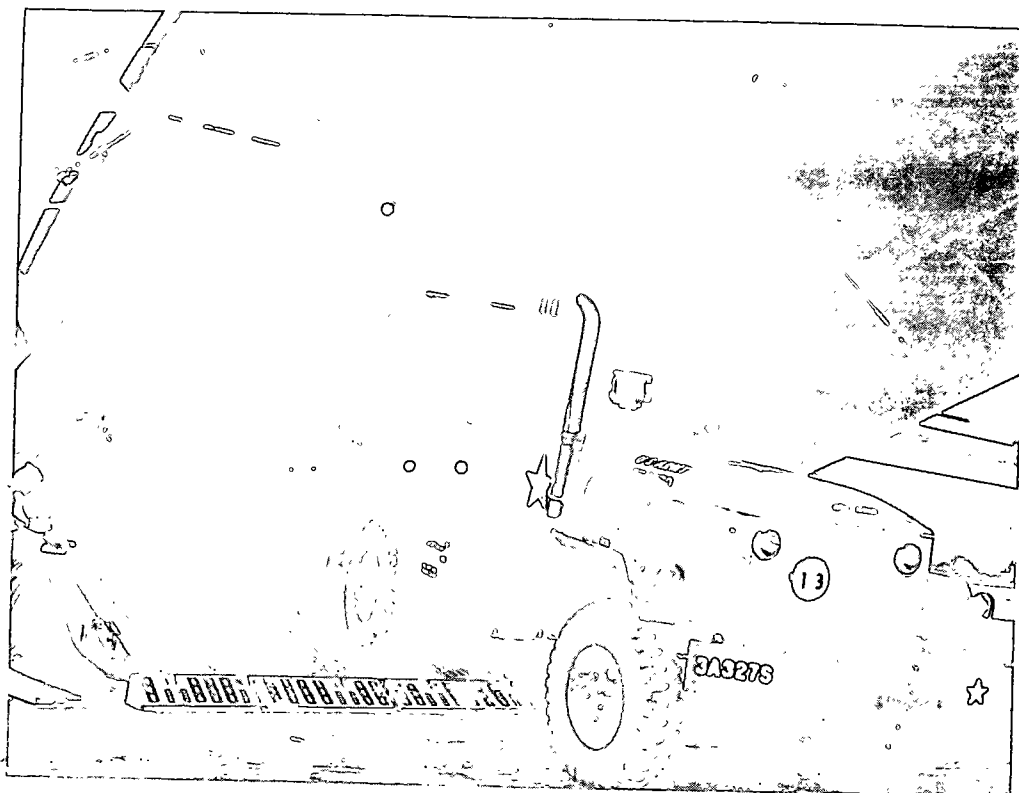


Figure 2-140. Offloading the M127 semitrailer over the aft ramp.

Table 2-24. Tiedown data for load 2-24

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
1	E37	1	25,000	Front clevis LH side
	F37	1	25,000	Front clevis RH side
	E36	1	25,000	Front axle LH side
	F36	1	25,000	Front axle RH side
	E29	1	25,000	Rear axle LH side
	F29	1	25,000	Rear axle RH side
2	D28	1	25,000	Ring on frame aft of jackstand RH side
	G28	1	25,000	Ring on frame aft of jackstand RH side
	E21	1	25,000	Rear tiedown ring LH side
	F21	1	25,000	Rear tiedown ring RH side
3	B37	1	25,000	Front clevis LH side
	C37	1	25,000	Front clevis RH side
	B33	1	25,000	Front rear axle LH side
	C33	1	25,000	Front rear axle RH side
	A27	1	25,000	Rear clevis RH side
	D27	1	25,000	Rear clevis LH side
4	B28	1	10,000	Tiedown ring on frame LH side
	C28	1	10,000	Tiedown ring on frame RH side
	A23	1	10,000	Rear tiedown ring LH side
	D23	1	10,000	Rear tiedown ring RH side
5	E22	1	10,000	Front clevis LH side
	F22	1	10,000	Front clevis RH side
	D14	1	10,000	Rear clevis RH side
	G14	1	10,000	Rear clevis LH side
6	E15	1	5,000	Lunette RH side
	F15	1	5,000	Lunette LH side
	E12	1	10,000	Axle LH side
	F12	1	10,000	Axle RH side

Table 2-24—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
7	E11	1	10,000	Front clevis RH side
	F11	1	10,000	Front clevis LH side
	E7	1	10,000	Rear clevis RH side
	F7	1	10,000	Rear clevis LH side
8	E5	1	5,000	Axle RH side
	F5	1	5,000	Axle LH side
9	B18	1	25,000	Front clevis LH side
	C18	1	25,000	Front clevis RH side
	B16	1	25,000	Front axle LH side
	C16	1	25,000	Front axle RH side
	B9	1	25,000	Rear axle LH side
	C9	1	25,000	Rear axle RH side
10	A9	1	25,000	Ring on frame aft of jackstand RH side
	D9	1	25,000	Ring on frame aft of jackstand LH side
	A8	2	25,000	Ring on frame fwd of wheels LH side
	D8	2	25,000	Ring on frame fwd of wheels RH side
	B2	1	25,000	Rear frame LH side
	C2	1	25,000	Rear frame RH side
11	Fwd Ramp			463L pallet
12	Fwd Ramp			463L pallet

Section XXV. LOAD 2-25: ONE TRUCK, WRECKER, 5-TON W/ WN M543A2; ONE RECOVERY VEHICLE M88; ONE TRUCK, CARGO $\frac{3}{4}$ -TON W/ WN M37B1; ONE TRAILER, CARGO $\frac{3}{4}$ -TON M101A1 (FIG 2-141)

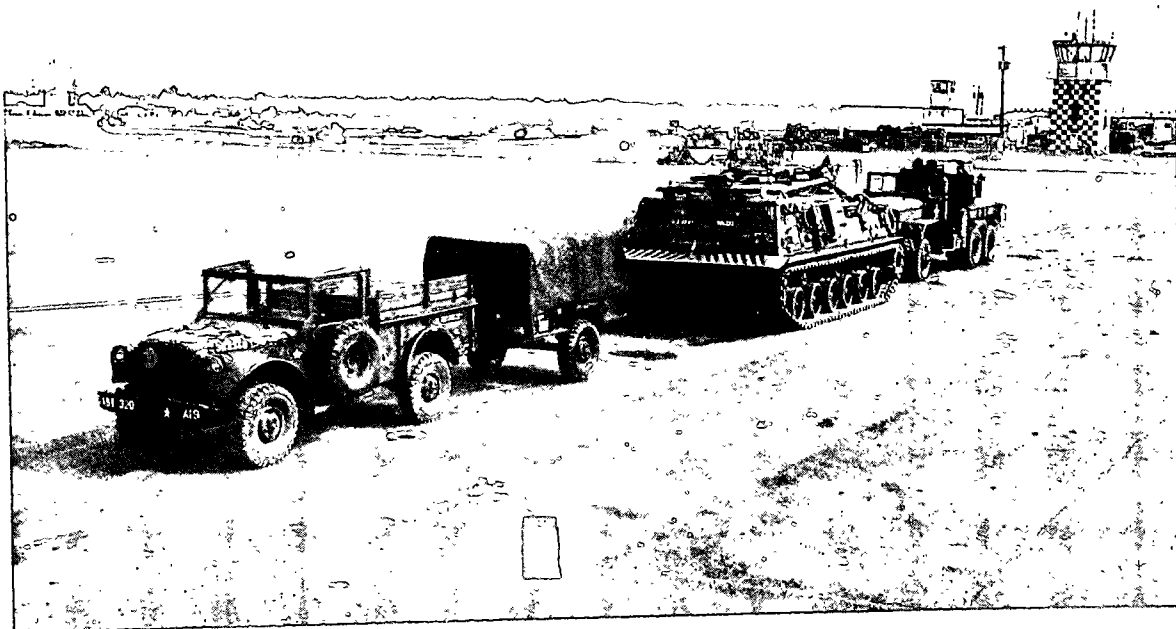


Figure 2-141. Vehicle lineup for load 2-25.

2-193. Airplane Loading Configuration

Airplane level kneeled with aft ramp in drive-in mode.

2-194. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-195. Materiel

Five pieces 2- by 12-inch by 16-foot lumber to be positioned under ramp pad for support during loading and offloading of the M88. Sufficient, minimum 1/2-inch thick, tolling and parking shoring to lay two 24-inch wide paths 75 feet long into the airplane for a driveway. A lesser amount of shoring is required if the shoring is "Leap-frogged" as the tracked vehicle is moved into the airplane.

2-196. Personnel and Duties

Four men load each truck into the airplane in 3 minutes. One man drives the vehicle, two men act as guides, and the fourth man signals directions during loading. Six men load the tracked vehicle into the airplane in 5 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring.

2-197. Loading Instructions

a. Position the five pieces of 2- by 12-inch by 16-foot shoring under ramp pads as shown in figure 2-142.

b. Drive items 1 and 2 into the cargo compartment over the aft ramp and park with the

vehicles at station prescribed in the tiedown diagram (fig 2-144).

c. Position shoring to provide a driveway in loading item 3.

d. Drive item 3 into the cargo compartment as shown in figure 2-143 and park the vehicle at station prescribed in the tiedown diagram (fig 2-144).

e. Remove shoring not required as parking shoring for item 3.

f. Drive item 4 into the cargo compartment and park the vehicle at station prescribed in the tiedown diagram (fig 2-144).

2-198. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

b. *Procedure.* Tie down all items in accordance with the instructions in tiedown diagram (fig 2-144), tiedown data table 2-25, and figures 2-145 through 2-149.

2-199. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane level kneeled.

2-200. Offloading Instructions

a. Offload all vehicles over forward ramp as shown in figure 2-150, using driveway shoring for the tracked vehicle. Five pieces of 2- by 12-inch by 16-foot lumber must be positioned under ramp pads for support during offloading of the M88.

b. Eight men offload the load in 7 minutes.

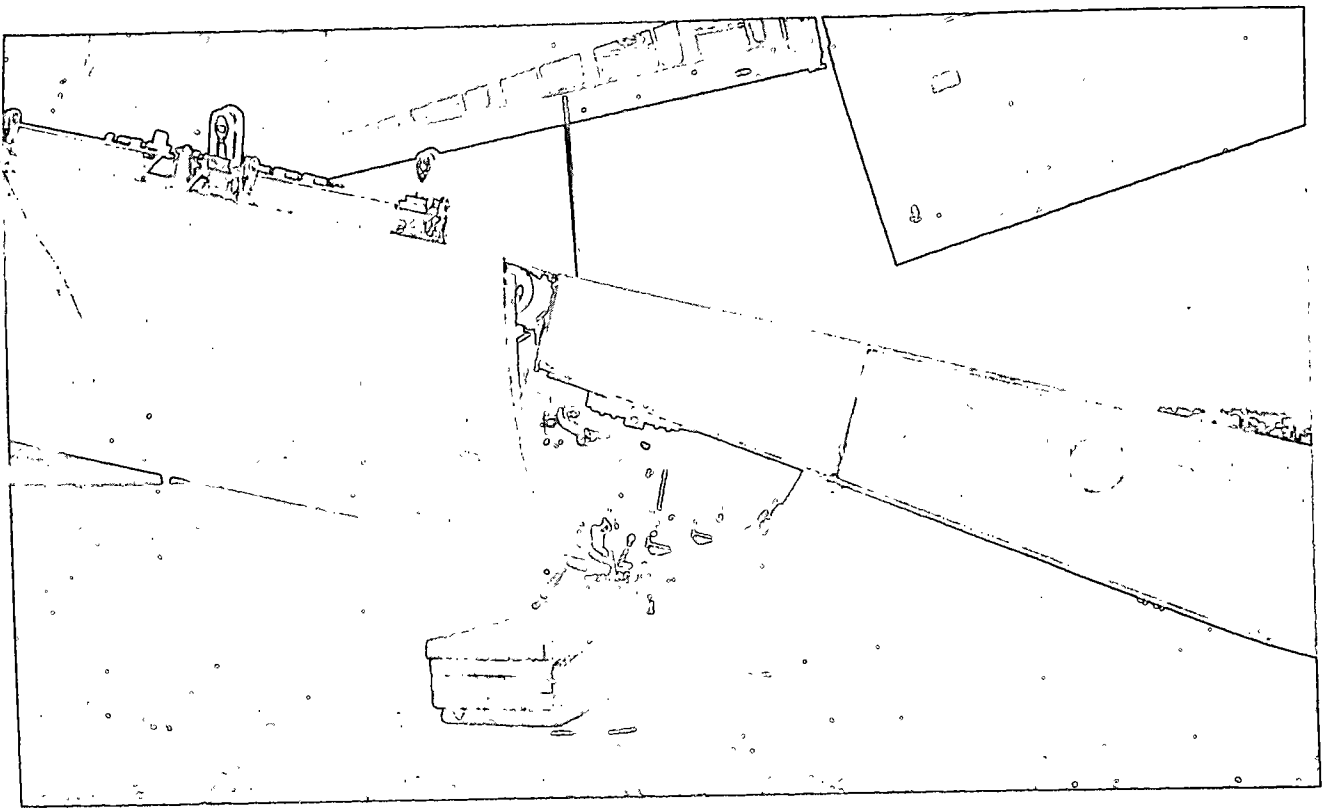


Figure 2-142. Positioning of shoring under aft ramp pads.

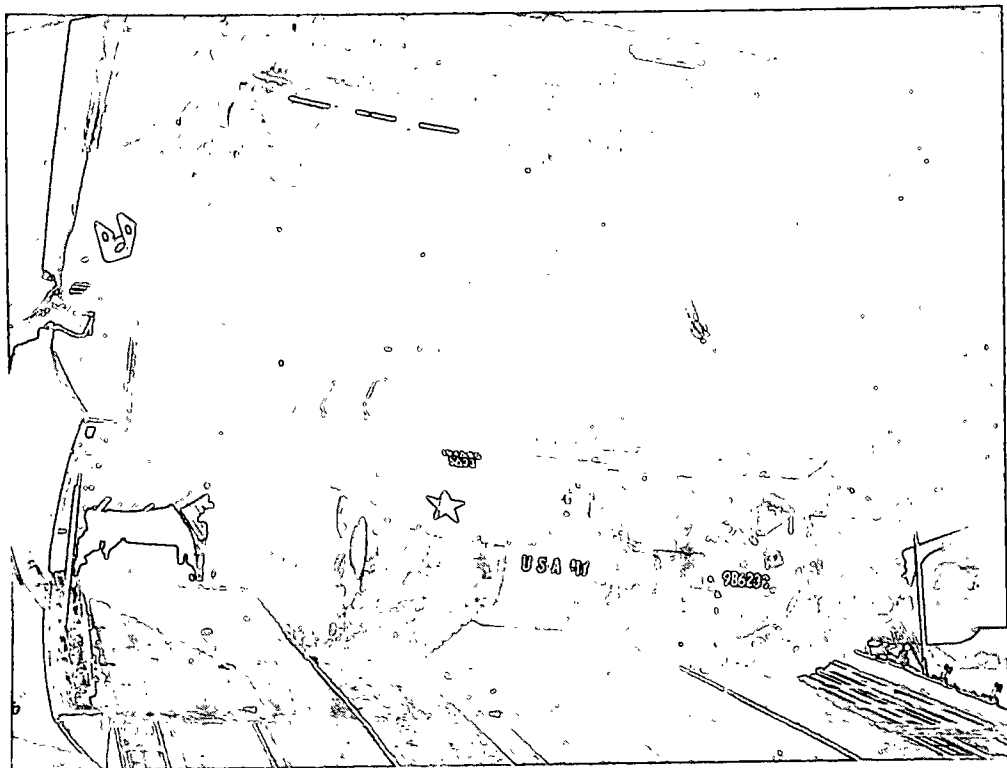
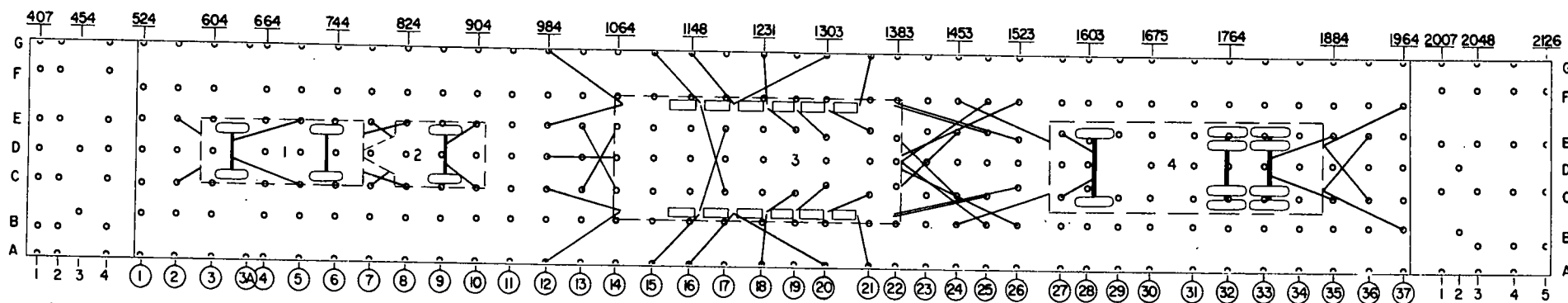


Figure 2-143. Loading the M88 recovery vehicle over the aft ramp.



C-5A CARGO LOADING

LOAD 2-25

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP RP STA	WEIGHT	CUBE	REMARKS
1 TRUCK, CARGO, 3/4-TON, W/M, M37B1	FWD	FRONT	585	5,820	825
2 TRAILER, CARGO, 3/4-TON, M101A1	FWD	REAR	915	1,280	519
3 RECOVERY VEHICLE, FT, MED, M88	FWD	FRONT	1,060	102,800	3,515
4 TRUCK, WRECKER, MED, 5-TON, M543A2	FWD	FRONT	1,560	34,280	2,256
TOTALS				144,180	7,115

Figure 2-144. Tiedown diagram for load 2-25.

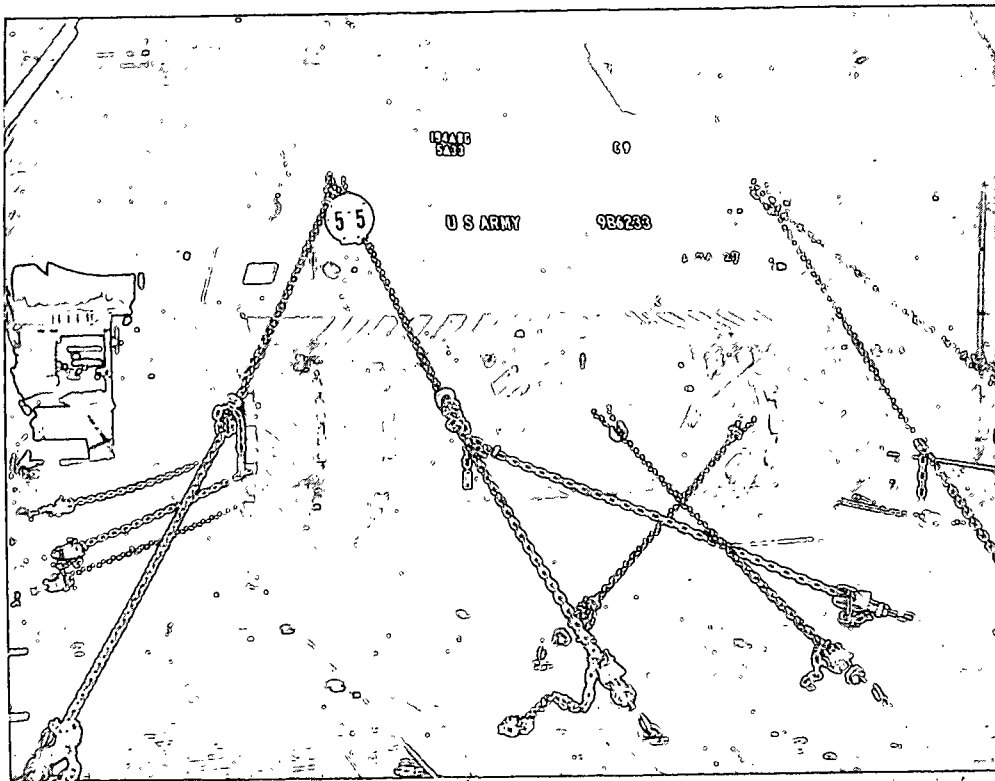


Figure 2-145. Front tiedown of the M88 recovery vehicle.

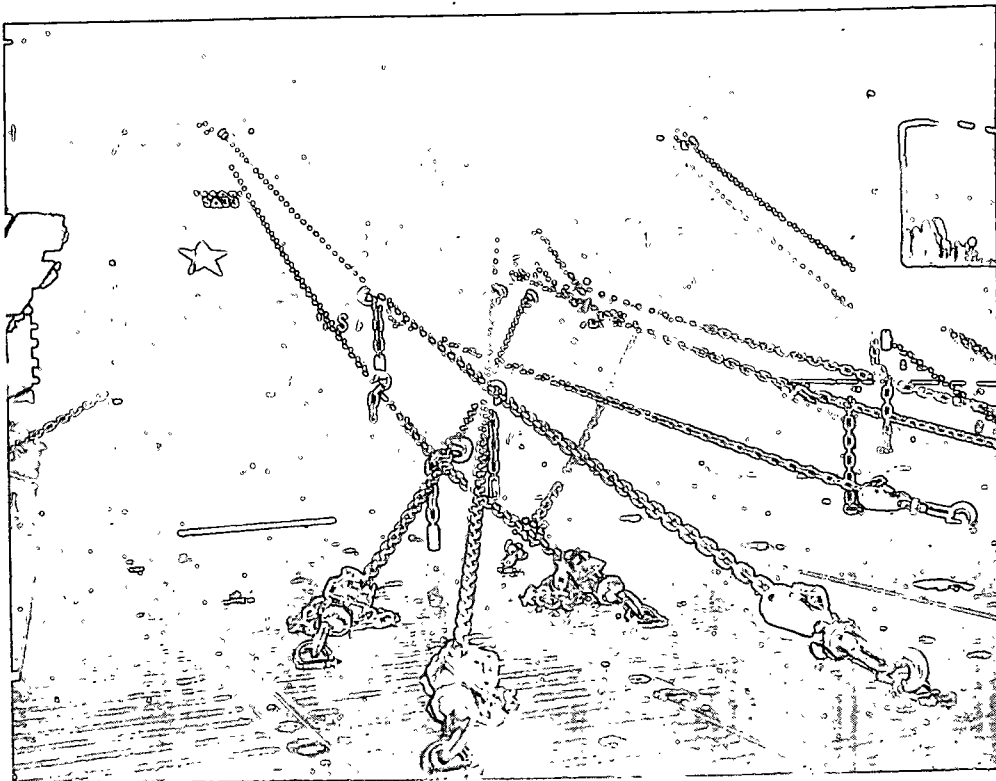


Figure 2-146. Rear tiedown of the M88 recovery vehicle.

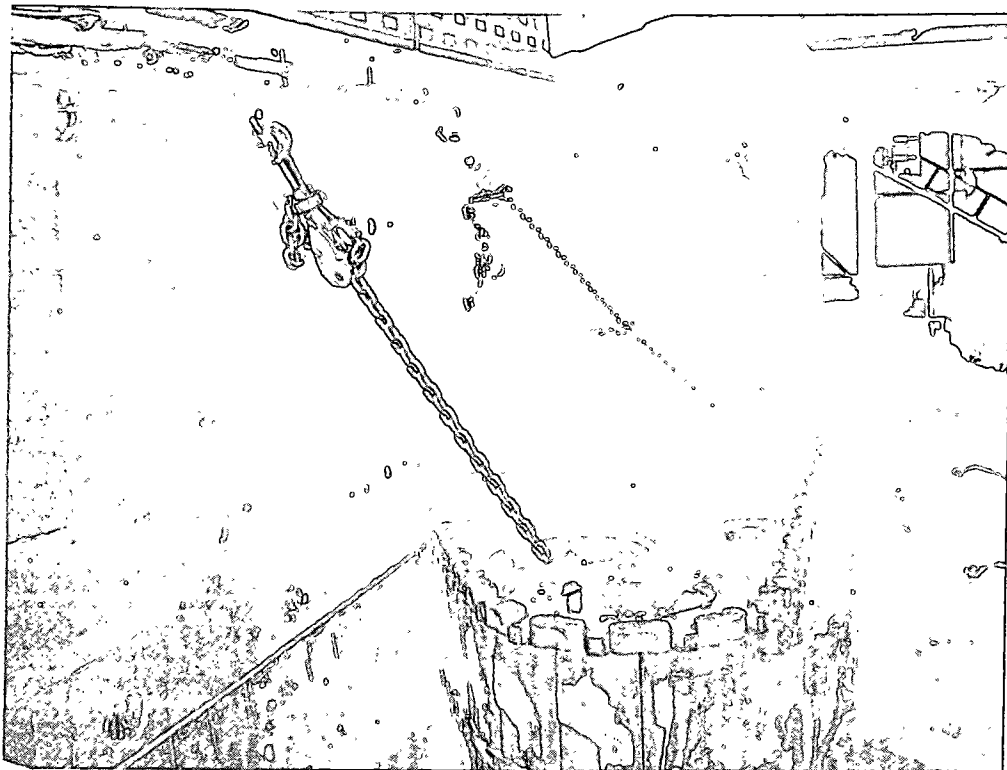


Figure 2-147. Left side tiedown of the M88 recovery vehicle.

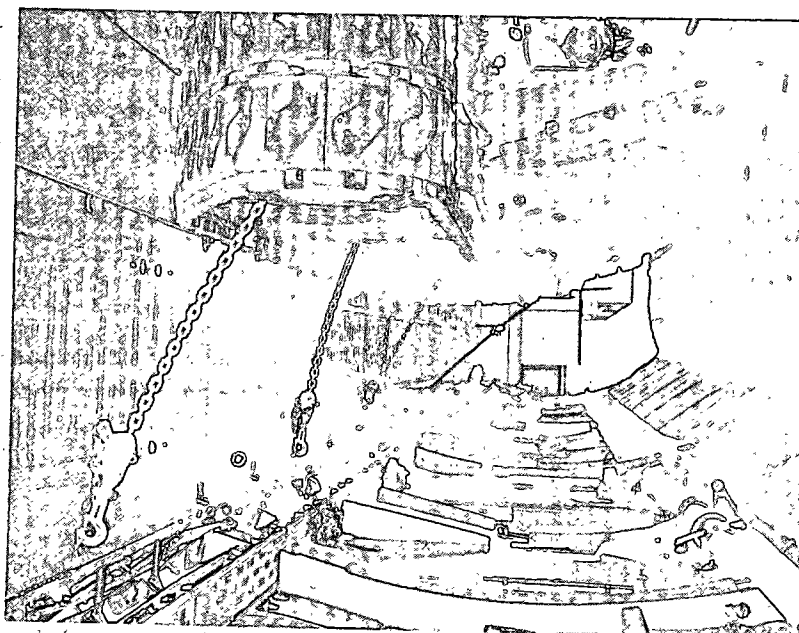


Figure 2-148. Right side tiedown of the M88 recovery vehicle.

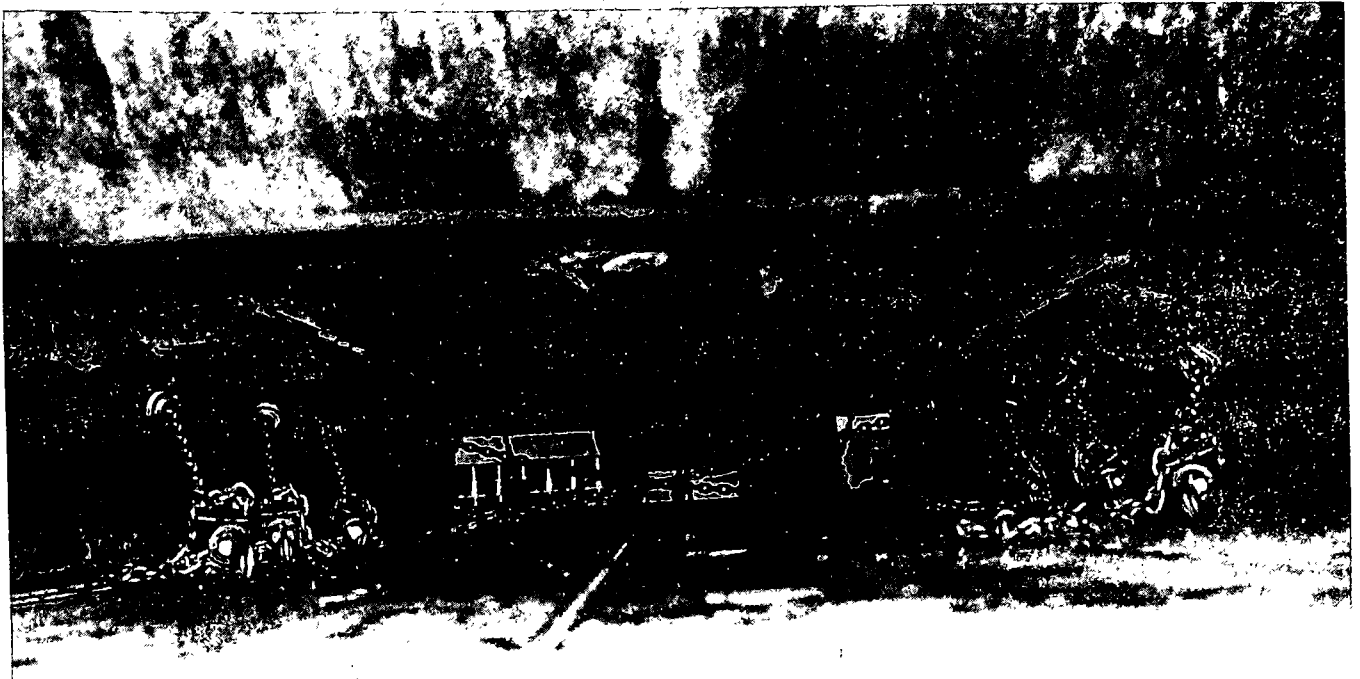


Figure 2-149. Tiedown under the M88 recovery vehicle.

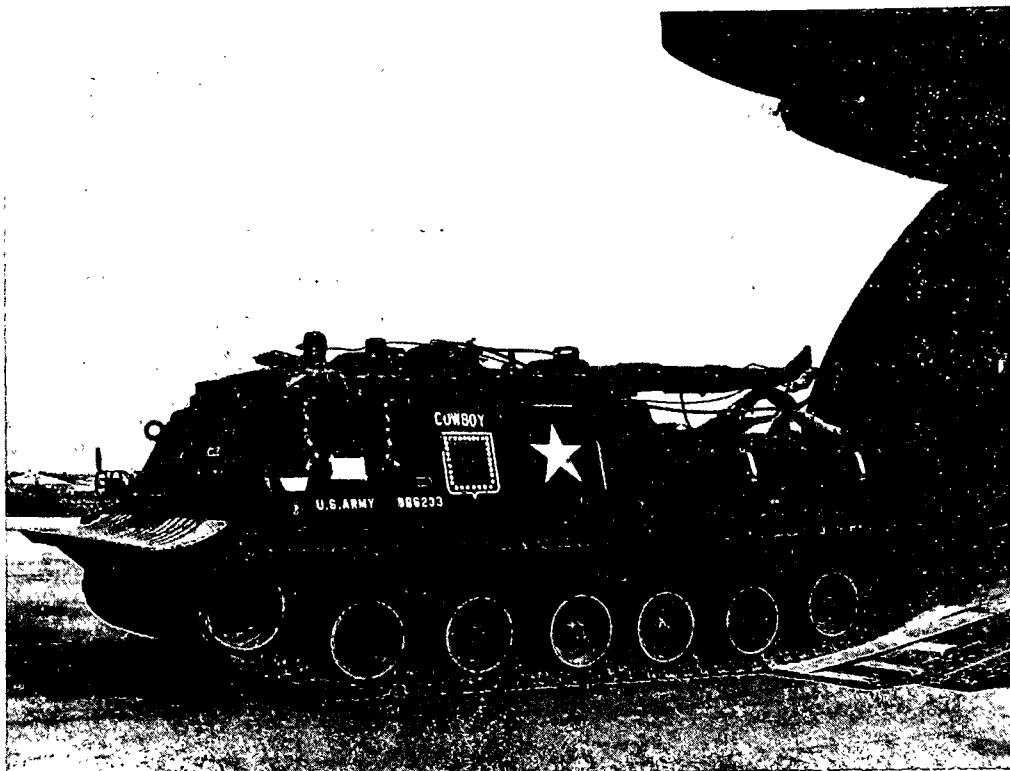


Figure 2-150. Offloading the M88 recovery vehicle over the forward ramp.

Table 2-25. Tiedown Data for Load 2-25

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	C2	1	10,000	Clevis at bumper LH side
	E2	1	10,000	Clevis at bumper RH side
	C5	1	10,000	Front axle LH side
	E5	1	10,000	Front axle RH side
	C8	1	10,000	Clevis at bumperette LH side
	E8	1	10,000	Clevis at bumperette RH side
2	C7	1	10,000	Lunette LH side
	E7	1	10,000	Lunette RH side
	C10	1	10,000	Axle LH side
	E10	1	10,000	Axle RH side
3	C12	2	25,000	Lifting eye LH side
	E12	2	25,000	Lifting eye RH side
	D12	1	25,000	Pintle hook
	A12	2	25,000	Lifting eye LH side
	G12	2	25,000	Lifting eye RH side
	C13	1	25,000	Towing shackle RH side
	E13	1	25,000	Towing shackle LH side
	A15	1	25,000	Second wheel axle LH side
	G15	1	25,000	Second wheel axle RH side
	A16	2	25,000	Ring between second and third wheel LH side
	G16	2	25,000	Ring between second and third wheel RH side
	C17	1	25,000	First wheel axle RH side
	E17	1	25,000	First wheel axle LH side
	A18	1	25,000	Axle between third and fourth wheel RH side
	G18	1	25,000	Axle between third and fourth wheel LH side
	C19	1	25,000	Third wheel axle LH side
	E19	1	25,000	Third wheel axle RH side
	C20	1	25,000	Fourth wheel axle LH side
	E20	1	25,000	Fourth wheel axle RH side
	C20	1	25,000	Fifth wheel axle LH side
	E20	1	25,000	Fifth wheel axle RH side
	A20	1	25,000	Ring between second and third wheel LH side
	G20	1	25,000	Ring between second and third wheel RH side
	A21	1	25,000	Ring between sixth and drive wheels LH side
	G21	1	25,000	Ring between sixth and drive wheels RH side
	C24	1	25,000	Towing shackle RH side
	E24	1	25,000	Towing shackle LH side
	B25	2	25,000	Pintle hook
	F25	2	25,000	Pintle hook
	C25	2	25,000	Lifting eye LH side
	E25	2	25,000	Lifting eye RH side
	C26	2	25,000	Lifting eye LH side
	E26	2	25,000	Lifting eye RH side
	D26	2	25,000	Pintle hook support LH side
	E26	2	25,000	Pintle hook support RH side
4	B24	1	25,000	Clevis at bumper LH side
	F24	1	25,000	Clevis at bumper RH side
	C27	1	25,000	Front axle LH side
	E27	1	25,000	Front axle RH side
	C35	1	25,000	Rear axle LH side
	E35	1	25,000	Rear axle RH side
	C36	1	25,000	Rear clevis RH side
	E36	1	25,000	Rear clevis LH side
	B37	1	25,000	Rear clevis LH side
	F37	1	25,000	Rear clevis RH side

Section XXVI. LOAD 2-26: ONE TRUCK, UTILITY 1/4-TON M151A1; ONE TRAILER, CARGO 1/4-TON M416; TWO TRUCK, CARGO 3/4-TON W / WN M37B1; TWO TRAILER, CARGO 3/4-TON M101A1; TWO TRUCK, CARGO 2 1/2-TON W / WN M36A2; TWO TRAILER 2 1/2-TON W / 45KW GENERATOR MOUNTED; ONE TRUCK, CARGO 2 1/2-TON W / WN M35A2; ONE TRAILER, ROCKET TRANSPORTER M329A2 (FIG 2-151)



Figure 2-151. Vehicle lineup for load 2-26.

2-201. Airplane Loading Configuration

Airplane level kneeled and aft ramp in drive-in mode.

2-202. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-203. Materiel

None.

2-204. Personnel and Duties

Twelve men load all vehicles into the airplane in 6 minutes. One man drives the vehicle and one man signals direction during loading.

2-205. Loading Instructions

Drive each vehicle into the cargo compartment over the aft ramp as shown in figures 2-152 and 2-153

and park each vehicle at the station prescribed in tiedown diagram (fig 2-154).

2-206. Tiedown (See Caution in Paragraph 1-9 c)

a. Personnel and Time. Eight men tie down the load in 25 minutes.

b. Procedure. Tie down the items in accordance with the instructions in tiedown data table 2-26 and tiedown diagram (fig 2-154).

2-207. Airplane Offloading Configuration

Airplane level kneeled and forward ramp in drive-off mode.

2-208. Offloading Instructions

- a.* Offload the vehicles over the forward ramp.
- b.* Twelve men offload the vehicles in 5 minutes.

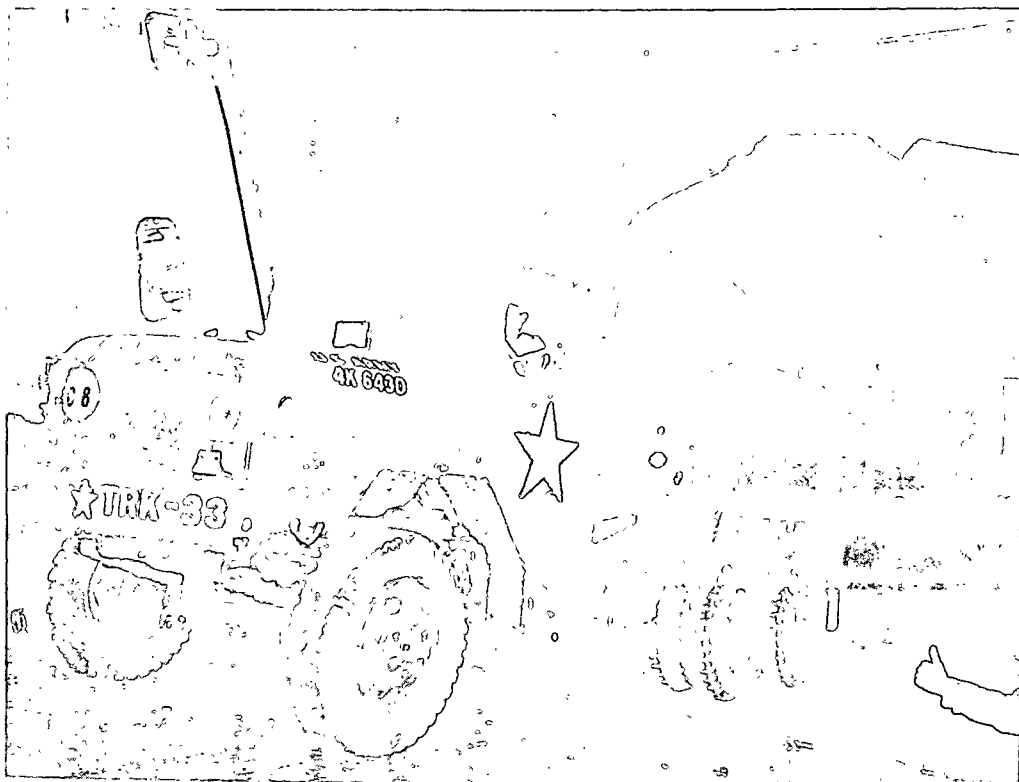


Figure 2-152. Loading the M35 truck and M329 rocket trailer over the aft ramp.

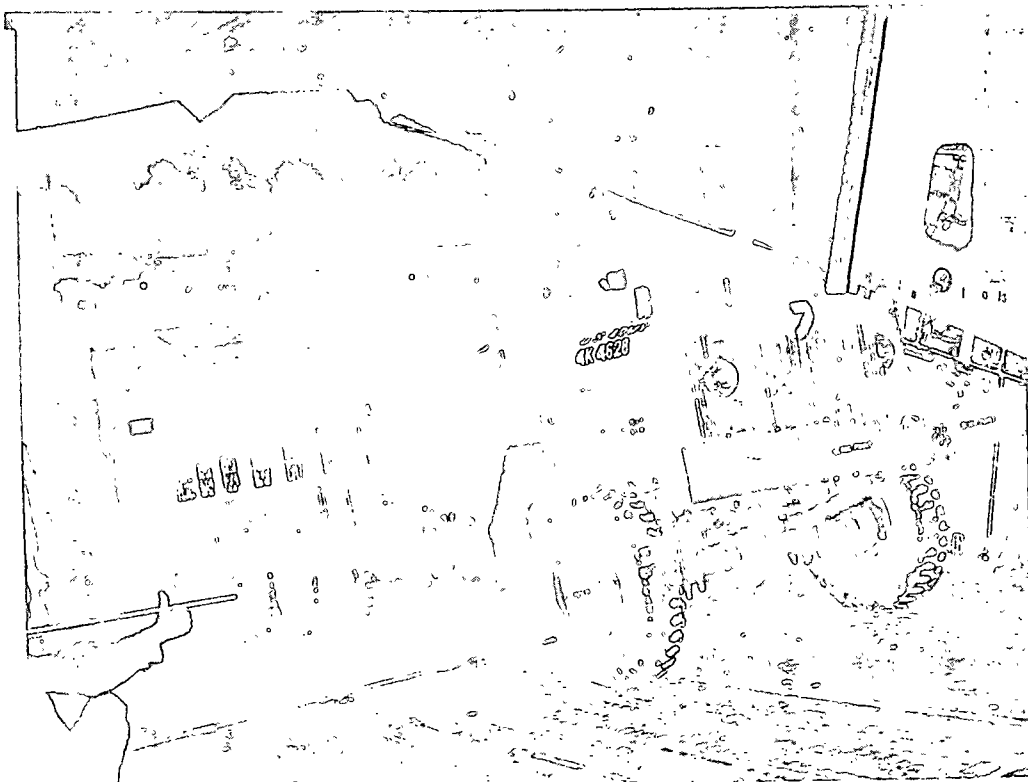
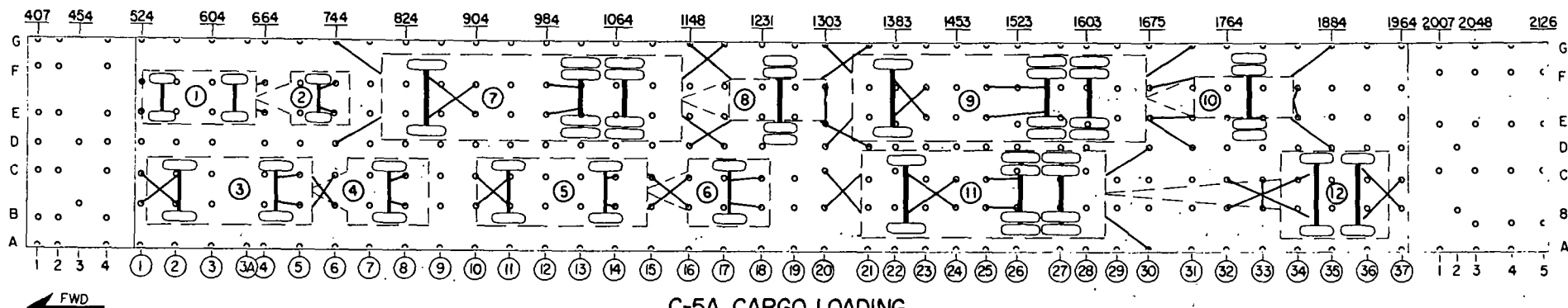


Figure 2-153. Loading the M36 truck and 2 1/2-ton trailer with 45KW generator over the aft ramp.



C-5A CARGO LOADING

LOAD 2-26

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	S/A			
1 TRUCK, UTILITY, 1/4-TON M551A1	FWD	FRONT	529	2,350	370	
2 TRAILER, CARGO, 1/4-TON M416	FWD	REAR	760	990	170	
3 TRUCK, CARGO, 3/4-TON W/WH M37B1	FWD	FRONT	530	5,820	825	
4 TRAILER, CARGO, 3/4-TON M101A1	FWD	REAR	660	1,290	519	
5 TRUCK, CARGO, 3/4-TON W/WH M37B1	FWD	FRONT	905	5,820	825	
6 TRAILER, CARGO, 3/4-TON M101A1	FWD	REAR	1240	1,290	519	
7 TRUCK, CARGO, 2 1/2-TON W/WH M36A2	FWD	FRONT	795	16,950	1,546	
8 TRAILER, 2 1/2-TON W/WH GEN MTO	FWD	REAR	1305	8,190	640	
9 TRUCK, CARGO, 2 1/2-TON W/WH M36A2	FWD	FRONT	1335	14,950	1,546	
10 TRAILER, 2 1/2-TON W/WH GEN MTO	FWD	REAR	1840	8,190	640	
11 TRUCK, CARGO, 2 1/2-TON W/WH M36A2	FWD	FRONT	1345	13,510	1,693	
12 TRAILER, ROCKET TRANSPORTER M329A2	FWD	REAR	1950	6,300	1,510	
TOTALS				83,270	10,803	

Figure 2-154. Tiedown diagram for load 2-26.

Table 2-26. Tiedown Data for Load 2-26

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E1	1	10,000	Clevis at bumper LH side
	F1	1	10,000	Clevis at bumper RH side
	E4	1	10,000	Clevis at bumperette LH side
	F4	1	10,000	Clevis at bumperette RH side
2	E6	1	10,000	Axle LH side
	F6	1	10,000	Axle RH side
3	B1	1	10,000	Front axle RH side
	C1	1	10,000	Front axle LH side
	B5	1	10,000	Rear axle LH side
	C5	1	10,000	Rear axle RH side
	B6	1	10,000	Clevis at bumperette RH side
	C6	1	10,000	Clevis at bumperette LH side
	B4	1	10,000	Clevis at bumper LH side
	C4	1	10,000	Clevis at bumper RH side
4	B8	1	10,000	Axle LH side
	C8	1	10,000	Axle RH side
5	B9	1	10,000	Clevis at bumper LH side
	C9	1	10,000	Clevis at bumper RH side
	B10	1	10,000	Front axle RH side
	C10	1	10,000	Front axle LH side
	B14	1	10,000	Rear axle LH side
	C14	1	10,000	Rear axle RH side
	B16	1	10,000	Clevis at bumperette RH side
	C16	1	10,000	Clevis at bumperette LH side
6	B18	1	10,000	Axle LH side
	C18	1	10,000	Axle RH side
7	D6	1	25,000	Clevis at bumper LH side
	G6	1	25,000	Clevis at bumper RH side
	E10	1	25,000	Front axle RH side
	F10	1	25,000	Front axle LH side
	E12	1	25,000	Front axle LH side
	F12	1	25,000	Front axle RH side
	D17	1	25,000	Clevis at bumperette LH side
	G17	1	25,000	Clevis at bumperette RH side
8	D16	1	25,000	Tiedown point on frame LH side
	G16	1	25,000	Tiedown point on frame RH side
	E20 / F20	1	5,000	Over rear step
	D21	1	25,000	Ring on rear frame LH side
	G21	1	25,000	Ring on rear frame RH side
9	D20	1	25,000	Clevis at bumper LH side
	G20	1	25,000	Clevis at bumper RH side
	E23	1	25,000	Front axle RH side
	F23	1	25,000	Front axle LH side
	E25	1	25,000	Front rear axle LH side
	F25	1	25,000	Front rear axle RH side
	D31	1	25,000	Clevis at bumperette LH side
10	G31	1	25,000	Clevis at bumperette RH side
	E30	1	25,000	Tiedown point on frame LH side
	F30	1	25,000	Tiedown point on frame RH side
	E34 / F34	1	5,000	Over rear step
	D35	1	25,000	Ring on rear frame LH side
	G35	1	25,000	Ring on rear frame RH side

Table 2-26—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
11	B20	1	25,000	Clevis at bumper RH side
	C20	1	25,000	Clevis at bumper LH side
	B24	1	25,000	Front axle RH side
	C24	1	25,000	Front axle LH side
	B25	1	25,000	Front rear axle LH side
	C25	1	25,000	Front rear axle RH side
	A30	1	25,000	Clevis at bumperette LH side
	D30	1	25,000	Clevis at bumperette RH side
12	B32	1	25,000	Tiedown point at front axle RH side
	C32	1	25,000	Tiedown point at front axle LH side
	B33 / C33	1	5,000	Over lunette of trailer
	B37	1	25,000	Tiedown point at rear axle RH side
	C37	1	25,000	Tiedown point at rear axle LH side

Section XXVII. LOAD 2-27: TWO TRUCK, TRACTOR, 2½-TON W/ WN M275; TWO SEMITRAILER, SHOP VAN, 6-TON M146; TWO TRUCK, TRACTOR, 5-TON M52A2; TWO SEMITRAILER, VAN ELECTRONIC M348A2; TWO TRUCK, SHOP VAN 2½-TON M109A2; TWO LOADED 463L PALLETS

2-209. Airplane Loading Configuration

Airplane level kneeled with forward ramp in drive-in mode.

2-210. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-211. Materiel

Four pieces of 2-by 12-inch by 16-foot lumber to be positioned on the ramp to raise tractor wheels to allow clearance for trailer jack pads when cresting the forward ramp hinge.

2-212. Personnel and Duties

Four men load each vehicle into the airplane in 10 minutes. One man drives the vehicle, two men act as guides and position shoring, and the fourth man signals directions during loading.

2-213. Loading Instructions

a. Drive each vehicle into the cargo compartment over the forward ramp as shown in figures 2-155 through 2-160 and park with each vehicle at station prescribed in the tiedown diagram (fig 2-157).

b. Position shoring on ramp when loading semitrailers to raise tractor wheels to allow

clearance for trailer jack pads when cresting ramp hinge.

c. Load the 463L pallets on forward ramp with forklift.

2-214. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 40 minutes.

b. *Procedure.* Tie down all items in accordance with the instructions in tiedown diagram (fig 2-157), tiedown data table 2-27 and figures 2-161 and 2-162.

2-215. Airplane Offloading Configuration

Aft ramp in drive-off mode with airplane level kneeled.

2-216. Offloading Instructions

a. Offload all vehicles over aft ramp.

b. Position shoring on ramp when offloading semitrailers to raise tractor wheels to allow clearance for trailer jack pads when cresting ramp hinge.

c. Offload the 463L pallets from forward ramp with a forklift.

d. Eight men offload the items in 20 minutes.

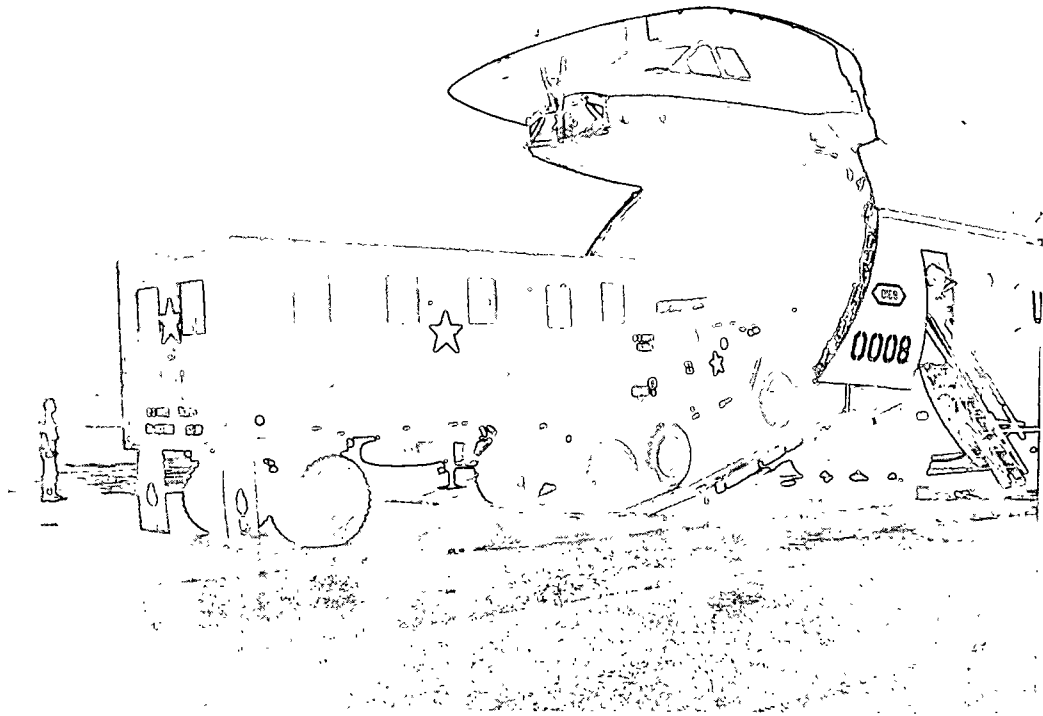


Figure 2-155. Loading the M146 semitrailer over the forward ramp.

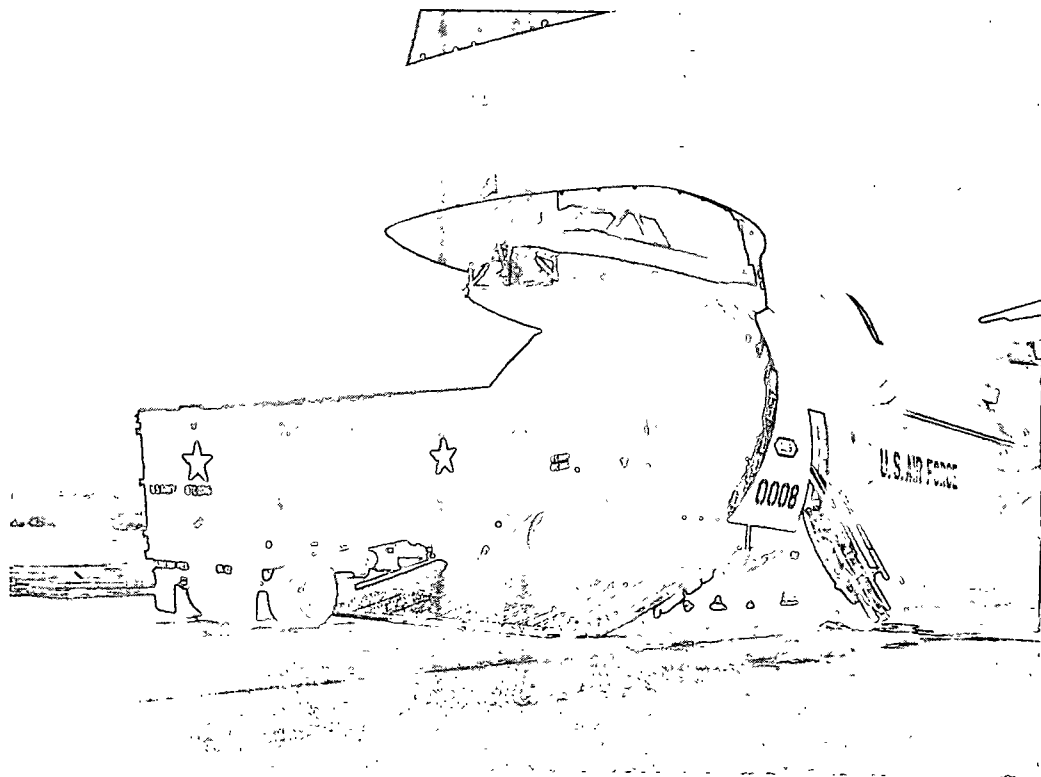
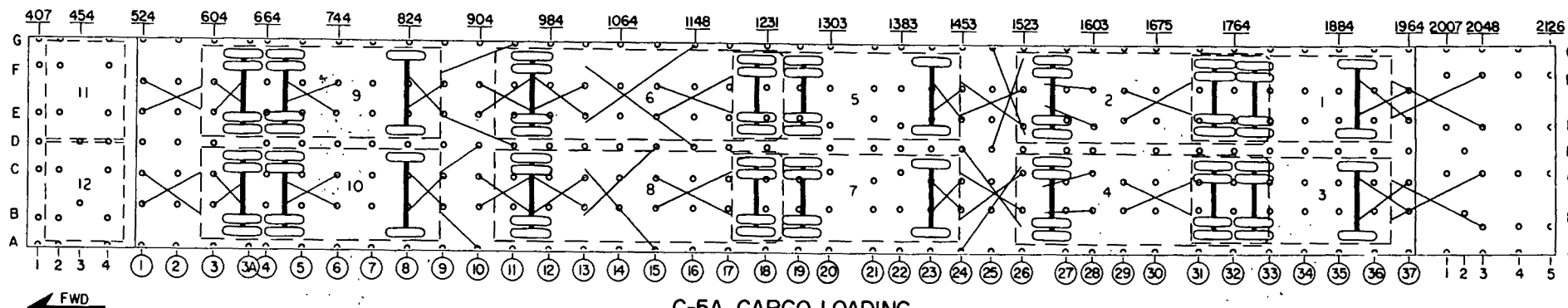


Figure 2-156. Loading the M348 semitrailer over the forward ramp.



C-5A CARGO LOADING

LOAD 2-27

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	STA			
1 TRUCK, TRACTOR, 2 1/2-TON, M275 W/W	AFT	FRONT	1945	11,590	1,178	
2 SEMITRAILER, SHOP VAN, 6-TON, M146	AFT	REAR	1515	7,930	2,343	
3 TRUCK, TRACTOR, 2 1/2-TON, M275 W/W	AFT	FRONT	1945	11,590	1,178	
4 SEMITRAILER, SHOP VAN, 6-TON, M146	AFT	REAR	1515	7,930	2,343	
5 TRUCK, TRACTOR, 5-TON, M52A2	AFT	FRONT	1450	18,740	1,770	
6 SEMITRAILER, VAN, ELECTRONIC, M348A2	AFT	REAR	925	8,770	2,461	
7 TRUCK, TRACTOR, 5-TON, M52A2	AFT	FRONT	1450	18,740	1,770	
8 SEMITRAILER, VAN, ELECTRONIC, M348A2	AFT	REAR	925	8,770	2,461	
9 TRUCK, SHOP VAN, 2 1/2-TON, M109	AFT	FRONT	860	15,770	1,980	
10 TRUCK, SHOP VAN, 2 1/2-TON, M109	AFT	FRONT	860	15,770	1,980	
11 463L PALLET		FWD RAMP		4,500	200	
12 463L PALLET		FWD RAMP		4,500	200	
TOTALS				134,800	19,904	

Figure 2-157. Tiedown diagram for load 2-27.

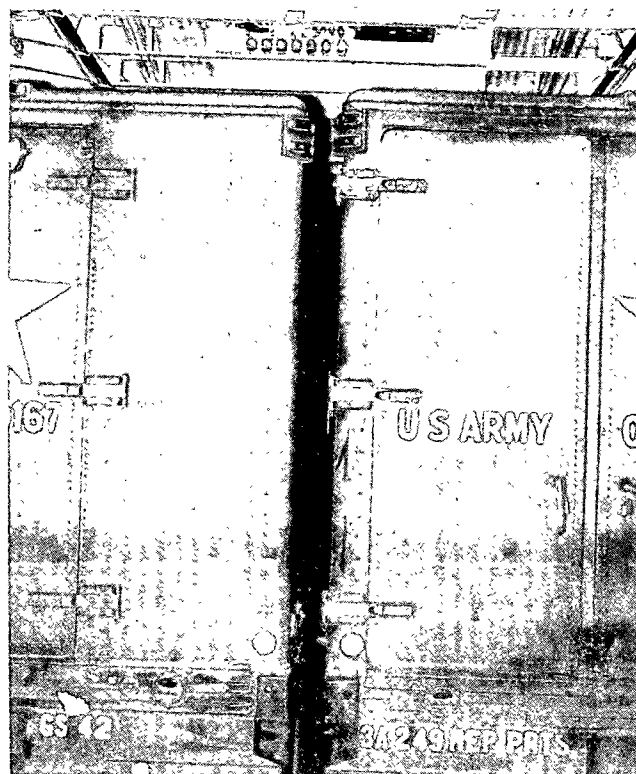


Figure 2-158. Two M348 semitrailers loaded side-by-side.

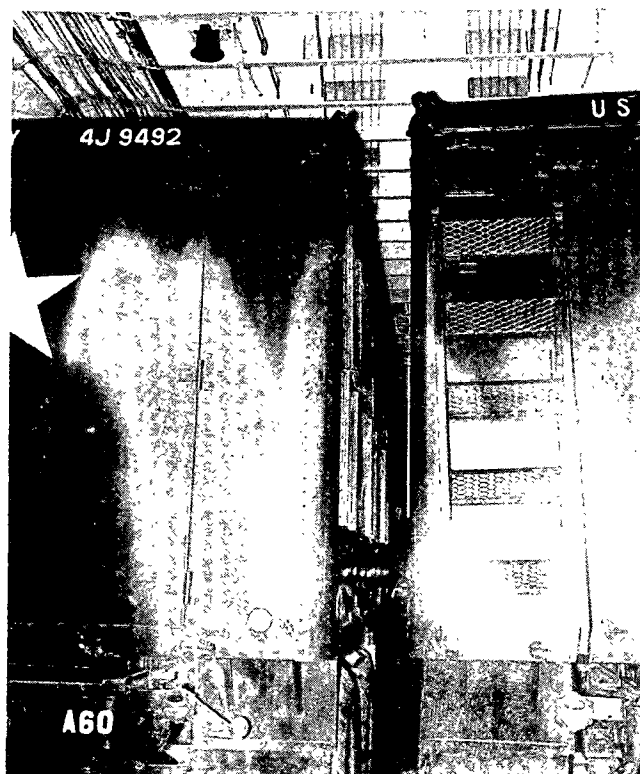


Figure 2-159. Two M109 truck vans loaded side-by-side.

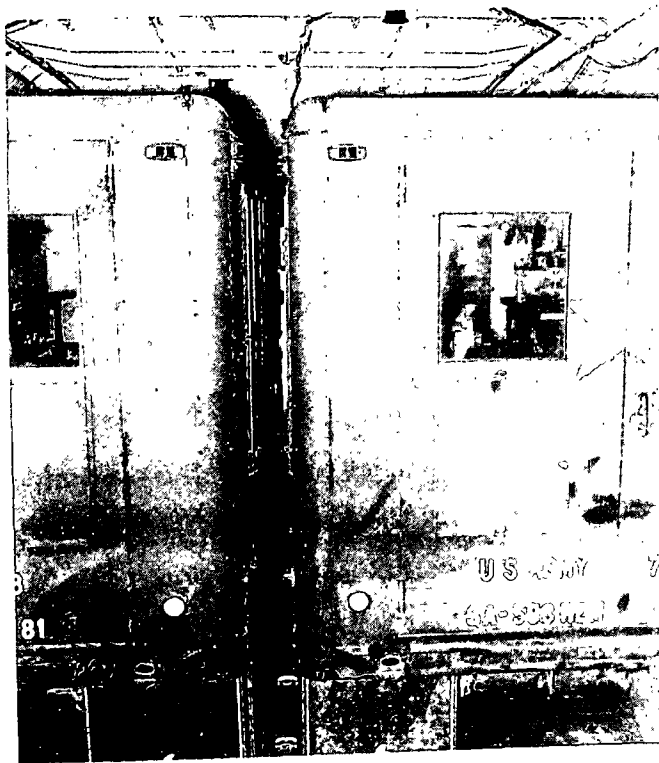


Figure 2-160. Two M146 semitrailers loaded side-by-side.

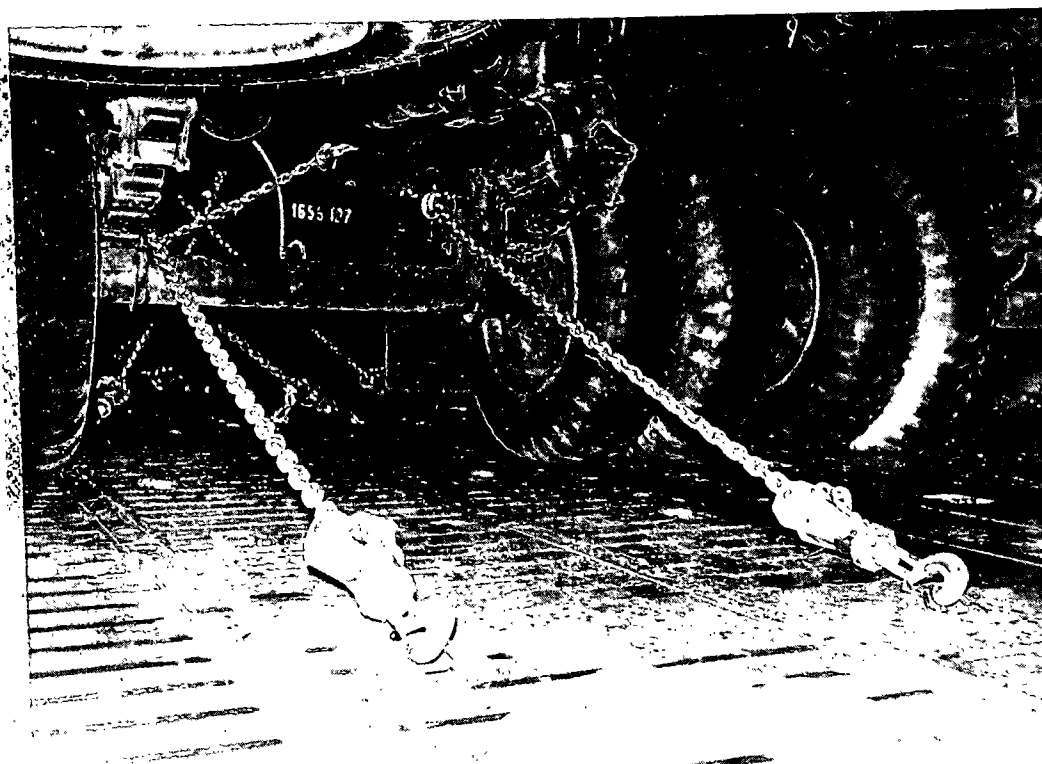


Figure 2-161. Tiedown of M146 semitrailer.

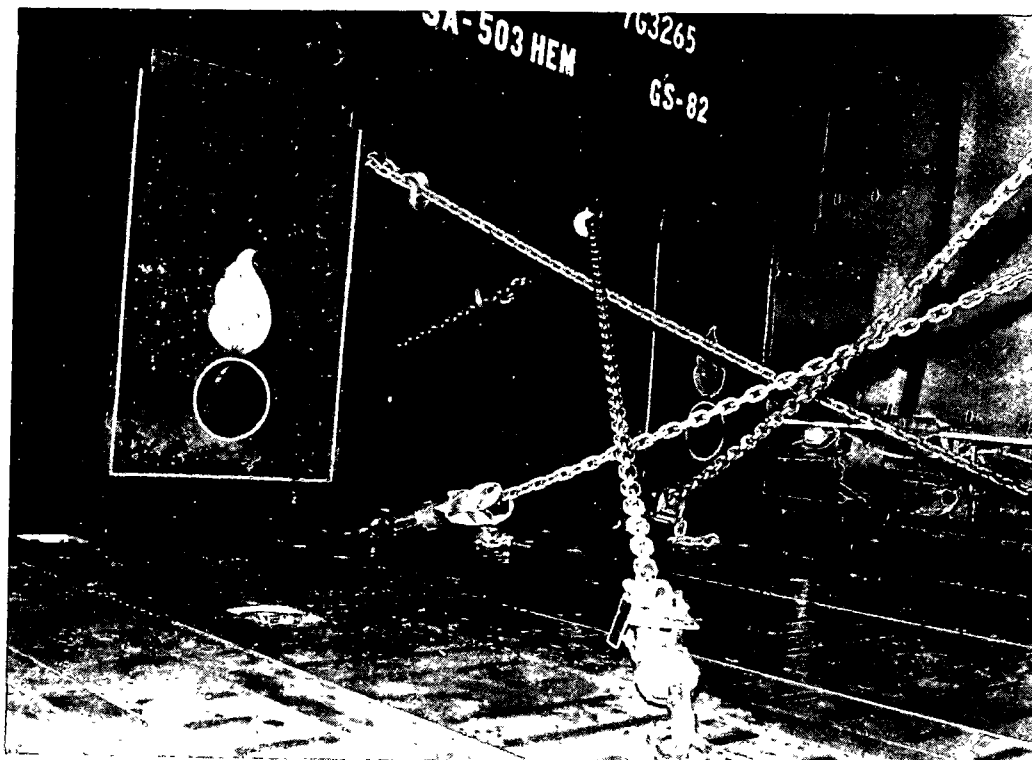


Figure 2-162. Tiedown of M146 semitrailer.

Table 2-27. Tiedown Data for Load 2-27

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at.
1	E3 (aft ramp)	2	25,000	Clevis at bumper LH side
	F3 (aft ramp)	2	25,000	Clevis at bumper RH side
	E37	1	25,000	Front axle LH side
	F37	1	25,000	Front axle RH side
	E29	1	25,000	Rear clevis LH side
	F29	1	25,000	Rear clevis RH side
2	E28	1	25,000	Hole in spring shackle RH side
	F28	1	25,000	Hole in spring shackle LH side
	D25	2	25,000	Frame LH side
	G25	2	25,000	Frame RH side
3	B3 (aft ramp)	2	25,000	Clevis at bumper LH side
	C3 (aft ramp)	2	25,000	Clevis at bumper RH side
	B37	1	25,000	Front axle LH side
	C37	1	25,000	Front axle RH side
	B29	1	25,000	Rear clevis LH side
	C29	1	25,000	Rear clevis RH side
4	B28	1	25,000	Hole in spring shackle RH side
	C28	1	25,000	Hole in spring shackle LH side
	A24	2	25,000	Frame LH side
	D24	2	25,000	Frame RH side

Table 2-27—Continued

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
5	E26	1	25,000	Clevis at bumper LH side
	F26	1	25,000	Clevis at bumper RH side
	E24	1	25,000	Front axle LH side
	F24	1	25,000	Front axle RH side
	E15	1	25,000	Rear clevis LH side
	F15	1	25,000	Rear clevis RH side
6	D16	2	25,000	Frame LH side
	G16	2	25,000	Frame RH side
	E13	1	25,000	Hole in spring shackle LH side
	F13	1	25,000	Hole in spring shackle RH side
	E10	1	25,000	Hole in spring shackle LH side
	F10	1	25,000	Hole in spring shackle RH side
7	B26	1	25,000	Clevis at bumper LH side
	C26	1	25,000	Clevis at bumper RH side
	B23	1	25,000	Front axle LH side
	C23	1	25,000	Front axle RH side
	B15	1	25,000	Rear clevis LH side
	C15	1	25,000	Rear clevis RH side
8	A15	2	25,000	Frame LH side
	D15	2	25,000	Frame RH side
	B13	1	25,000	Hole in spring shackle LH side
	C13	1	25,000	Hole in spring shackle RH side
	B10	1	25,000	Hole in spring shackle LH side
	C10	1	25,000	Hole in spring shackle RH side
9	D11	1	25,000	Clevis at bumper RH side
	G11	1	25,000	Clevis at bumper LH side
	E9	1	25,000	Front axle LH side
	F9	1	25,000	Front axle RH side
	E6	1	25,000	Front rear axle LH side
	F6	1	25,000	Front rear axle RH side
	E3	1	25,000	Rear axle LH side
	F3	1	25,000	Rear axle RH side
	E1	1	25,000	Rear clevis LH side
	F1	1	25,000	Rear clevis RH side
10	A10	1	25,000	Clevis at bumper RH side
	D10	1	25,000	Clevis at bumper LH side
	B9	1	25,000	Front axle LH side
	C9	1	25,000	Front axle RH side
	B6	1	25,000	Front rear axle LH side
	C6	1	25,000	Front rear axle RH side
	B3	1	25,000	Rear axle LH side
	C3	1	25,000	Rear axle RH side
	B1	1	25,000	Rear clevis LH side
	C1	1	25,000	Rear clevis RH side
11	Fwd Ramp RH side			463L pallet
12	Fwd Ramp LH side			463L pallet

Section XXVIII. LOAD 2-28: ONE HOWITZER, SP, 105MM, M108; ONE TRUCK, TRACTOR, 5-TON W / WN M52A2; ONE SEMITRAILER, STAKE, 12-TON M127A1; ONE TRUCK, STAKE 1—1½-TON 7000—9000 GVW; ONE TRUCK, DUMP, 5-TON W / WN M51A2; ONE TRUCK, FORKLIFT 6000 POUND ROUGH TERRAIN; ONE TRUCK, WRECKER, 5-TON M543A2

2-217. Airplane Loading Configuration

Airplane level kneeled and aft ramp in drive-in mode.

2-218. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-219. Materiel

Sufficient, minimum ½-inch thick, rolling and parking shoring to lay a 24-inch wide path 120 feet long positioned as a driveway for the M108 howitzer. A lesser amount of shoring is required for this operation if the shoring is "leap-frogged" as the tracked vehicle is moved into the airplane. One piece of ½-inch plywood shoring 48- by 48-inch to be positioned under forks of forklift.

NOTE

Shoring is required for offloading the howitzer. If the shoring is to be shipped with the howitzer, it is positioned and tied down as directed by the airplane commander.

2-220. Personnel and Duties

a. Six men load the M108 howitzer into the airplane in 3 minutes. One man drives, four men act as guides and position shoring, and the sixth man signals directions during loading and assist in positioning shoring.

b. Ten men load the remaining vehicles into the airplane in 8 minutes. One man drives the vehicle and one man signals directions during loading.

2-221. Loading Instructions

a. Position driveway shoring from aft ramp toes into the airplane.

b. Drive the M108 howitzer into the cargo compartment over the aft ramp and park at the station prescribed in the tiedown diagram (fig 2-163).

c. Drive the remaining vehicles into the cargo compartment over the aft ramp and park at station prescribed in the tiedown diagram.

d. Position one piece of shoring under forks of the forklift as shown in figure 2-164.

2-222. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 30 minutes.

b. *Procedure.* Tie down the items in accordance with the instructions in tiedown data table 2-28, tiedown diagram (fig 2-163 and figures 2-165 through 2-169).

2-223. Airplane Offloading Configuration

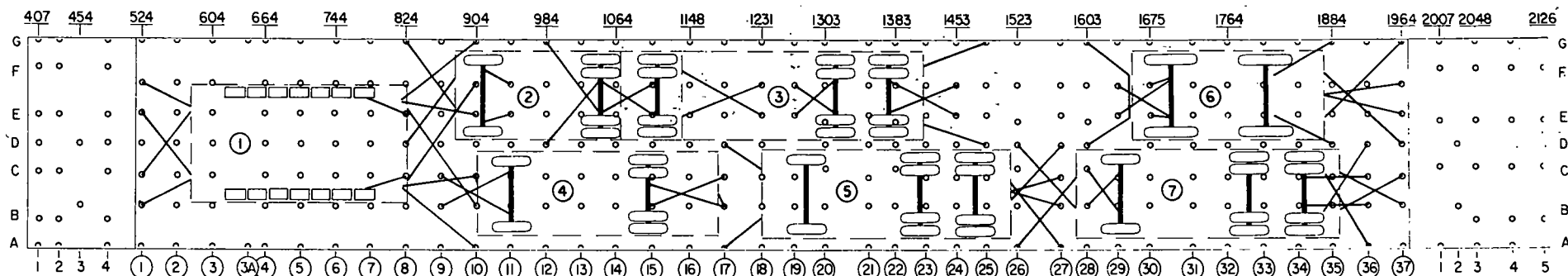
Airplane level kneeled and forward ramp in drive-off mode.

2-224. Offloading Instructions

a. Offload the items over the forward ramp.

b. Rolling shoring will be required in offloading the M108 howitzer.

c. Ten men offload all items in 4 minutes.



C-5A CARGO LOADING

LOAD 2-28

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	STA			
1 HOWITZER, LIGHT, SP 105MM, M108	FWD	FRONT	580	41,280	2,030	
2 TRACTOR, 5-TON 6x6 W/M MS2A2	FWD	FRONT	880	18,740	1,770	
3 SEMITRAILER, STAKE 12 TON M127A1	FWD	REAR	1415	10,080	2,503	
4 TRUCK, STAKE 1-1 1/2-TON 7000-9000 GVM	FWD	FRONT	905	7,170	1,057	
5 TRUCK, DUMP, 5-TON HMMN MS1A2	FWD	FRONT	1230	18,740	1,678	
6 TRUCK, FORKLIFT, GAS P/L, 6000# ROUGH TERRAIN	FWD	FRONT	1655	23,000	1,758	SHORING REQUIRED
7 TRUCK, WRECKER, MEDIUM 5-TON MS43A2	FWD	FRONT	1590	34,280	2,256	
TOTALS				153,290	13,053	

Figure 2-163. Tiedown diagram for load 2-28.

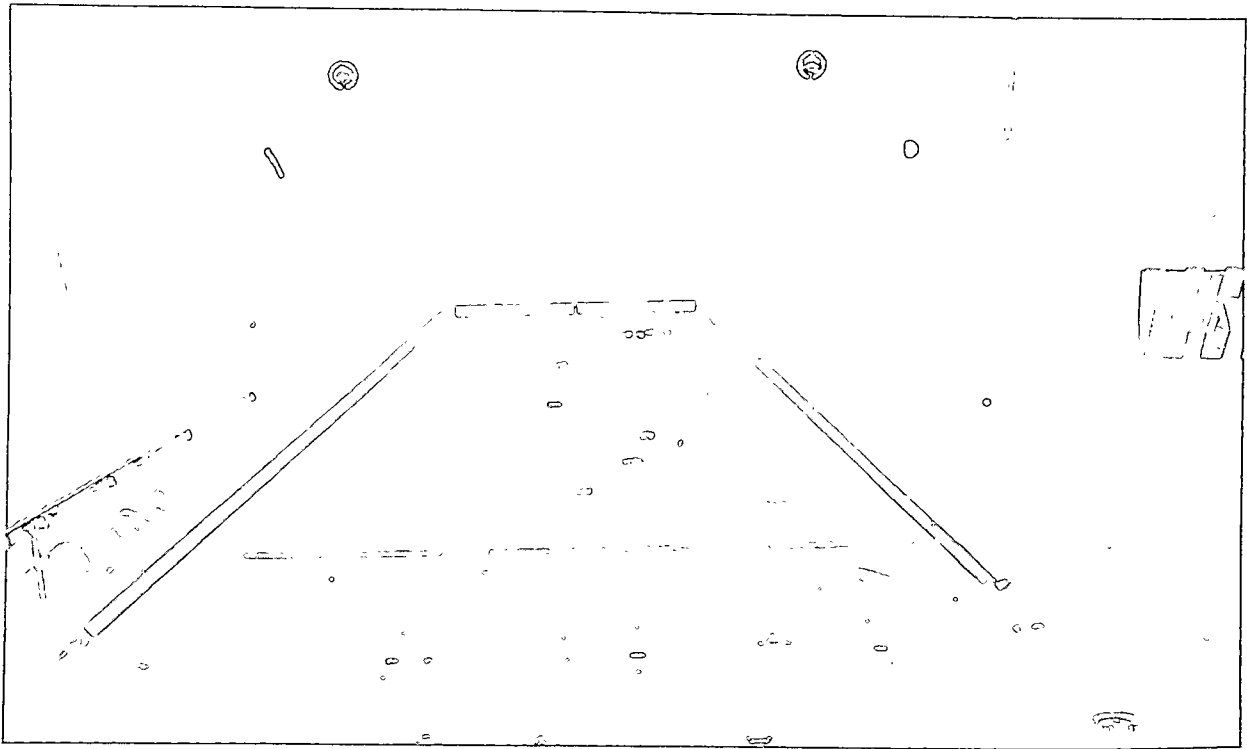


Figure 2-164. Positioning of shoring under forks of forklift.

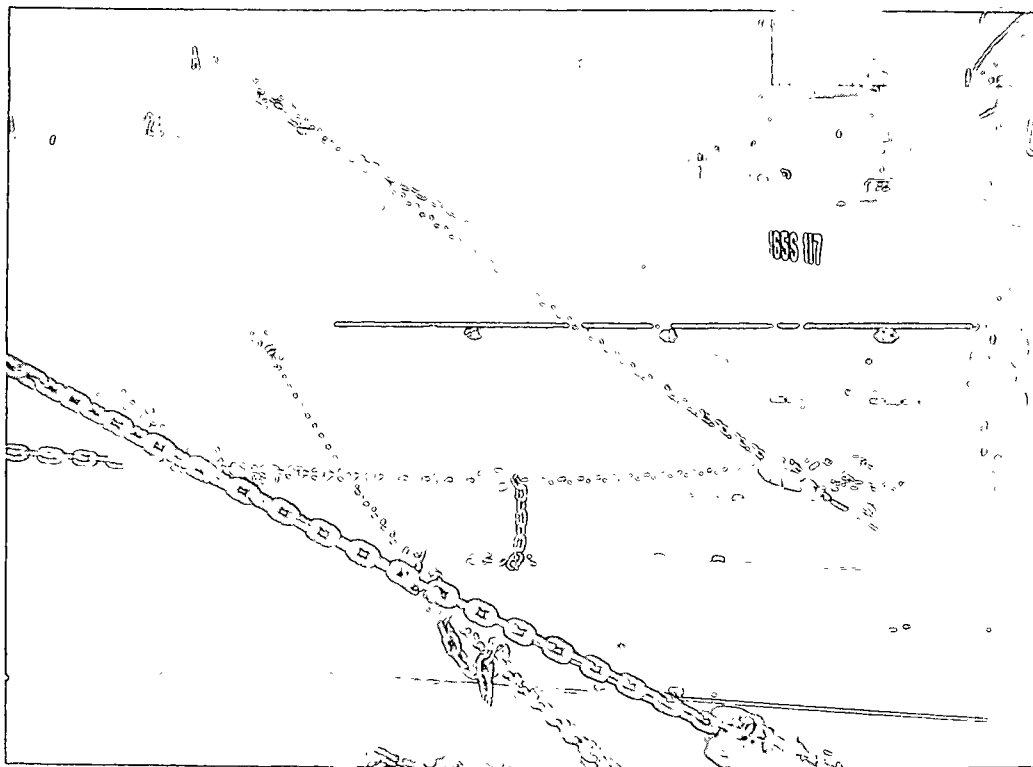


Figure 2-165. Tiedown for rear of the M108 howitzer.

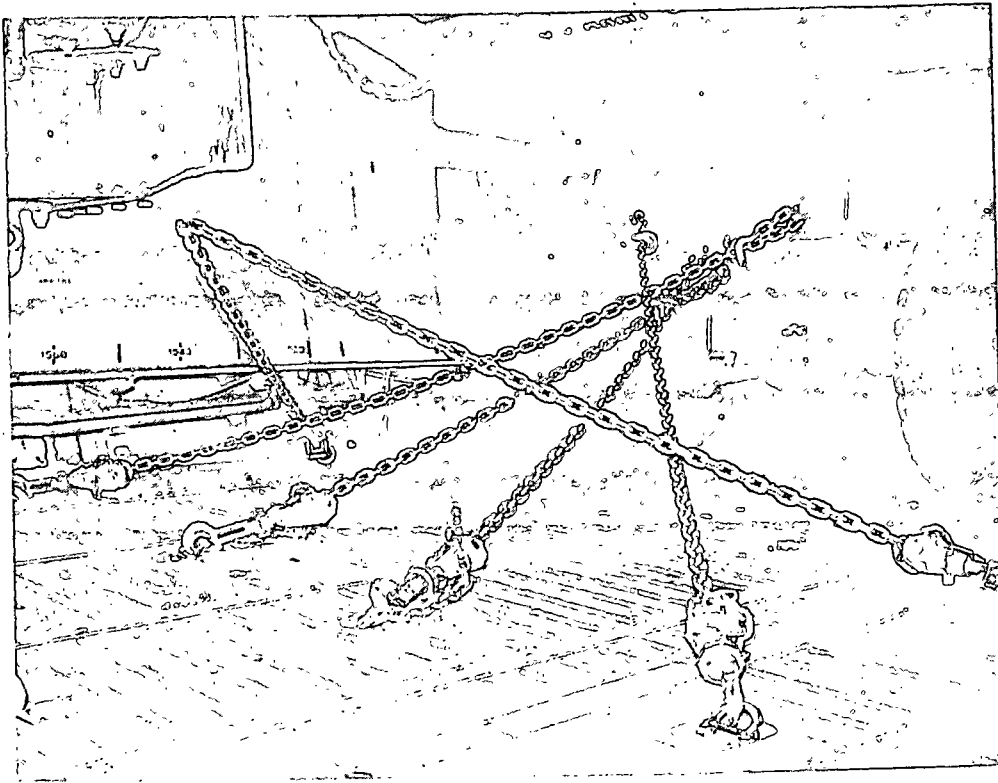


Figure 2-166. Tiedown for rear of the M51 truck dump.

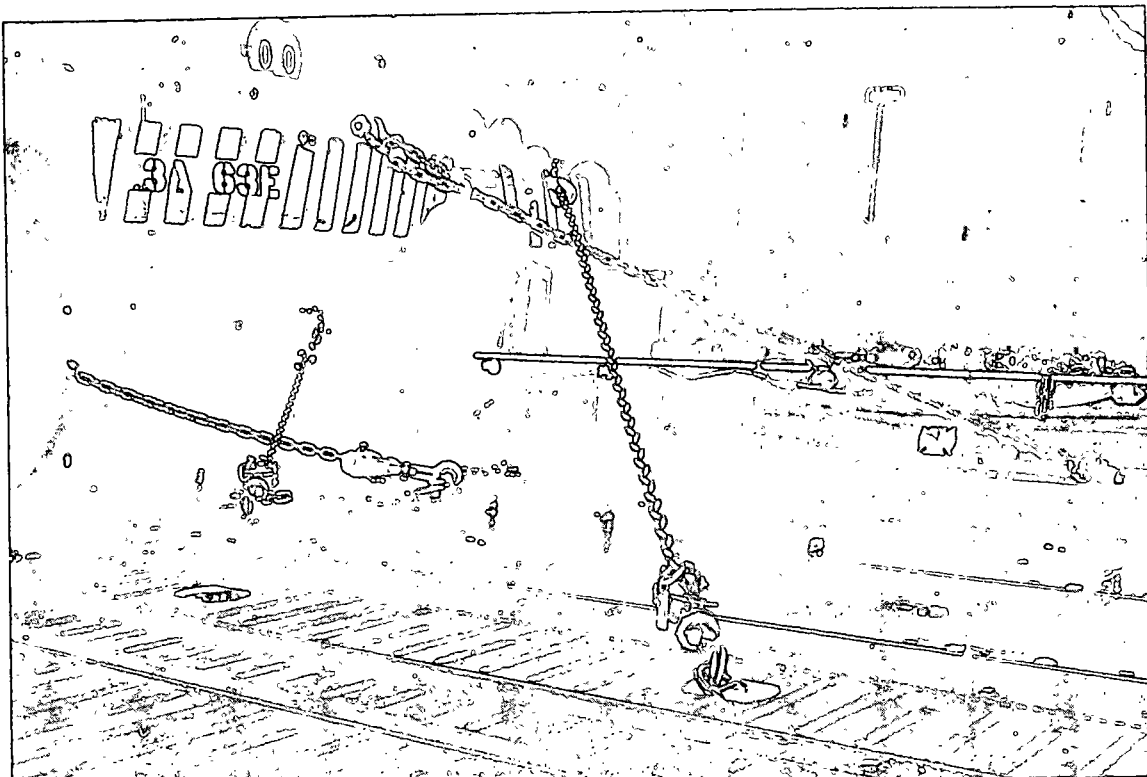


Figure 2-167. Tiedown for front of the M543 truck wrecker.

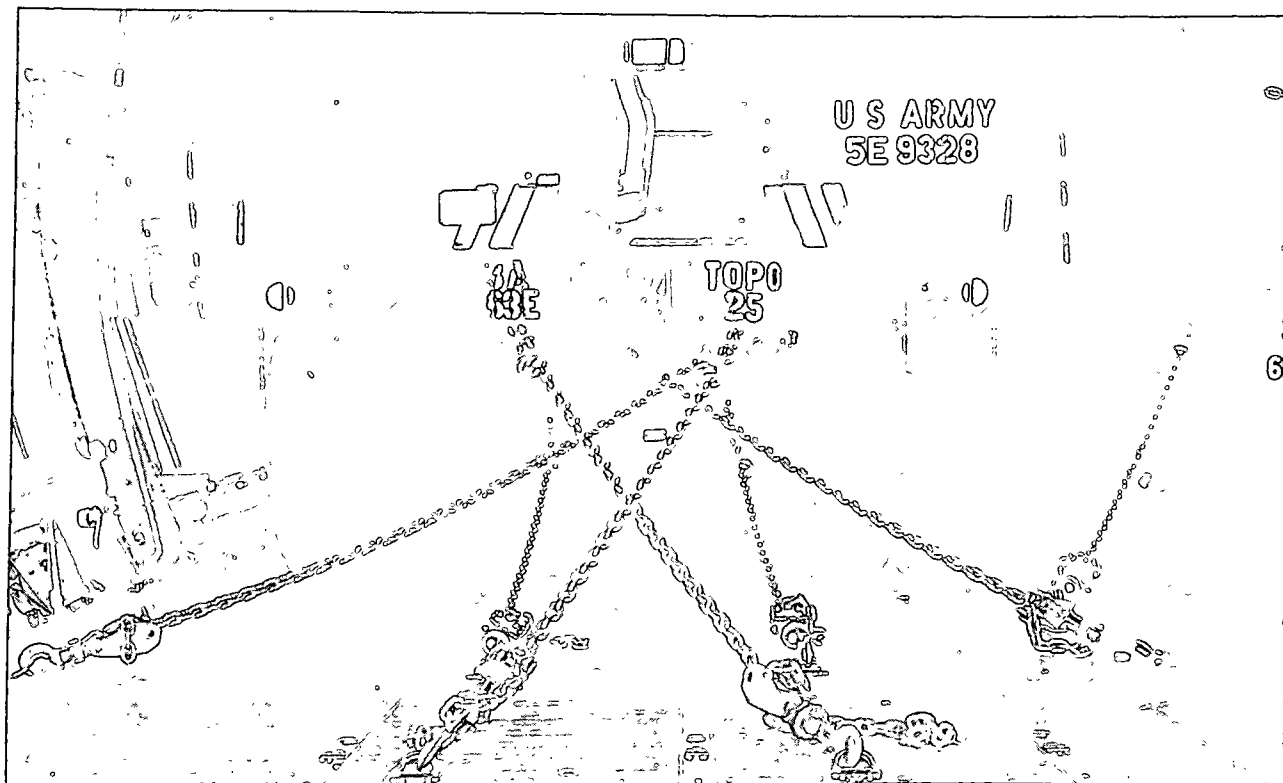


Figure 2-168. Tiedown for rear of the M543 truck, wrecker.

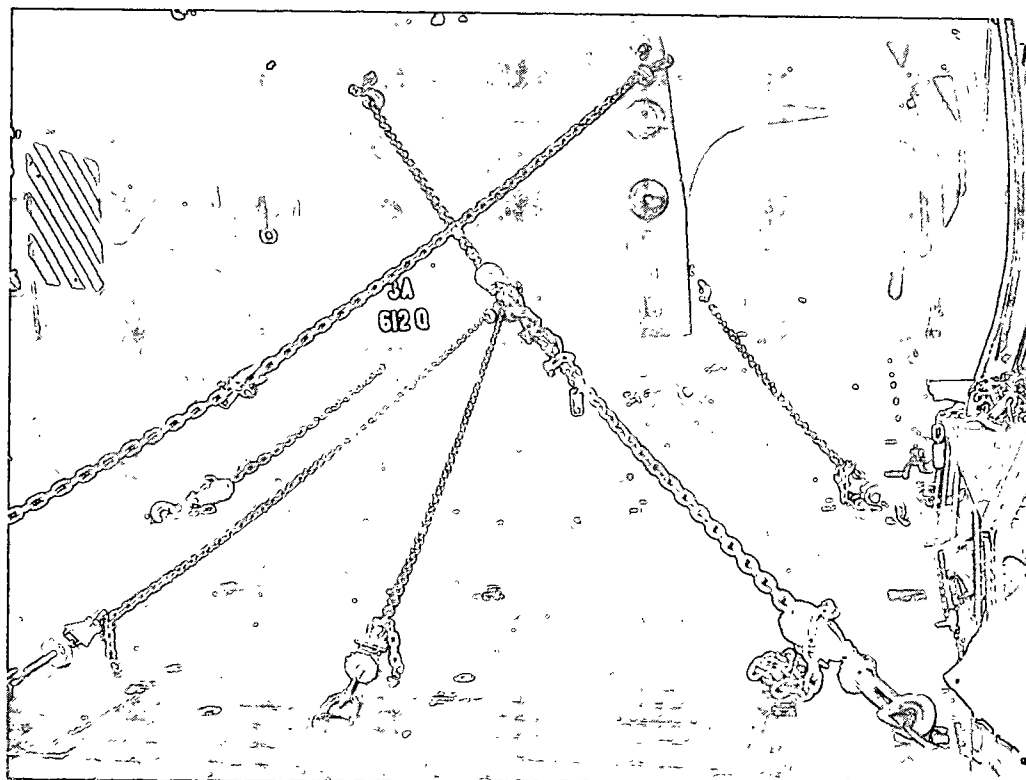


Figure 2-169. Tiedown for 6000-pound forklift.

Table 2-28. Tiedown Data for Load 2-28

Item No.	Tiedown fitting	Tiedown device		Attach to item at.
		Quantity	Size	
1	B1	1	25,000	Lifting eye LH side
	F1	1	25,000	Lifting eye RH side
	C1	1	25,000	Towing shackle RH side
	E1	1	25,000	Towing shackle LH side
	C8	1	25,000	Seventh wheel axle LH side
	E8	1	25,000	Seventh wheel axle RH side
	A10	2	25,000	Lifting eye LH side
	G10	2	25,000	Lifting eye RH side
	B10	2	25,000	Towing shackle RH side
	F10	2	25,000	Towing shackle LH side
	C10	1	25,000	Lifting eye LH side
	E10	1	25,000	Lifting eye RH side
2	D8	2	25,000	Clevis at bumper RH side
	G8	2	25,000	Clevis at bumper LH side
	E11	1	25,000	Front axle LH side
	F11	1	25,000	Front axle RH side
	D12	2	25,000	Front rear axle RH side
	G12	2	25,000	Front rear axle LH side
	E15	1	25,000	Front rear axle RH side
	F15	1	25,000	Front rear axle LH side
	E18	1	25,000	Rear clevis RH side
	F18	1	25,000	Rear clevis LH side
3	E19	1	25,000	Front axle RH side
	F19	1	25,000	Front axle LH side
	E24	1	25,000	Rear axle RH side
	F24	1	25,000	Rear axle LH side
	D25	1	25,000	Rear tiedown ring LH side
	G25	1	25,000	Rear tiedown ring RH side
4	B9	1	25,000	Front axle LH side
	C9	1	25,000	Front axle RH side
	C10	1	5,000	Front bumper
	B17	1	5,000	Rear frame
	B17	1	25,000	Rear axle LH side
	C17	1	25,000	Rear axle RH side
5	A17	1	25,000	Clevis at bumper LH side
	D17	1	25,000	Clevis at bumper RH side
	A27	1	25,000	Rear clevis LH side
	D27	1	25,000	Rear clevis RH side
	B27	1	25,000	Pintle
	C27	1	25,000	Pintle
6	E30	1	25,000	Front axle LH side
	F30	1	25,000	Front axle RH side
	E29	1	25,000	Front axle RH side
	F29	1	25,000	Front axle LH side
	D35	1	25,000	Side tiedown ring LH side
	G35	1	25,000	Side tiedown ring RH side
	D37	2	25,000	Hole in frame RH side
	G37	2	25,000	Hole in frame LH side
	E37	1	10,000	Pintle
	F37	1	10,000	Pintle
	D28 / G28	1	5,000	Through frame above forks
7	A26	1	25,000	Clevis at bumper RH side
	D26	1	26,000	Clevis at bumper LH side
	B28	1	25,000	Front axle RH side
	C28	1	25,000	Front axle LH side
	A36	1	25,000	Rear frame RH side
	D36	1	25,000	Rear frame LH side
	B36	1	25,000	Rear axle RH side
	C36	1	25,000	Rear axle LH side
	B37	1	25,000	Bumperette RH side
	C37	1	25,000	Bumperette LH side

Section XXIX. LOAD 2-29: ONE TRUCK, CARGO 2½-TON M35A2; ONE TRAILER, WATER, 1½-TON M149; FOUR TRUCK, UTILITY ¼-TON M151A1; TWO TRAILER, CARGO, ¼-TON M416; FOUR TRUCK, TRACTOR 5-TON W/ WN M52A2; FOUR SEMITRAILER, STAKE 12-TON M127A1 (FIG 2-170)

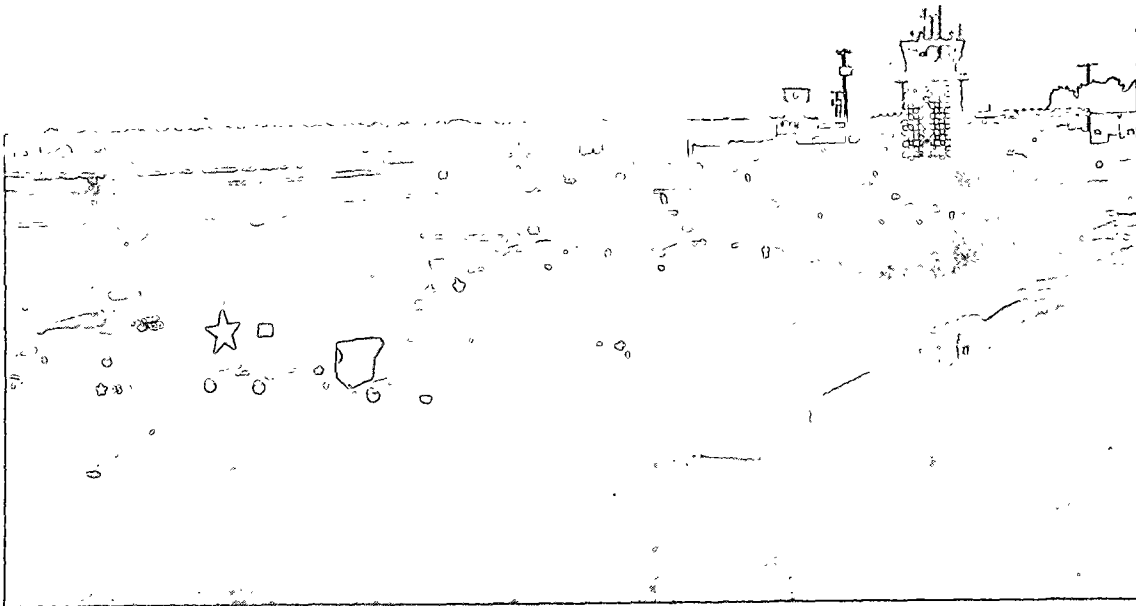


Figure 2-170. Vehicle lineup for load 2-29.

2-225. Airplane Loading Configuration

Airplane is level kneeled and aft ramp in drive-in mode.

2-226. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-227. Materiel

Three pieces of ½- by 12-inch by 4-foot parking shoring to be positioned under lunette of items 2, 6 and 8.

2-228. Personnel and Duties

Eighteen men load all items into the airplane in 13 minutes. One man drives the vehicle and one man signals directions during loading.

2-229. Loading Instructions

Drive each item into the cargo compartment over the aft ramp and park each item at the station

prescribed in the tiedown diagram (fig 2-171). Uncouple items 2, 6 and 8 from their prime mover and position the parking shoring under their lunettes.

2-230. Tiedown (See Caution in Paragraph 1-9 c)

a. Personnel and Time. Twelve men tie down the load in 30 minutes.

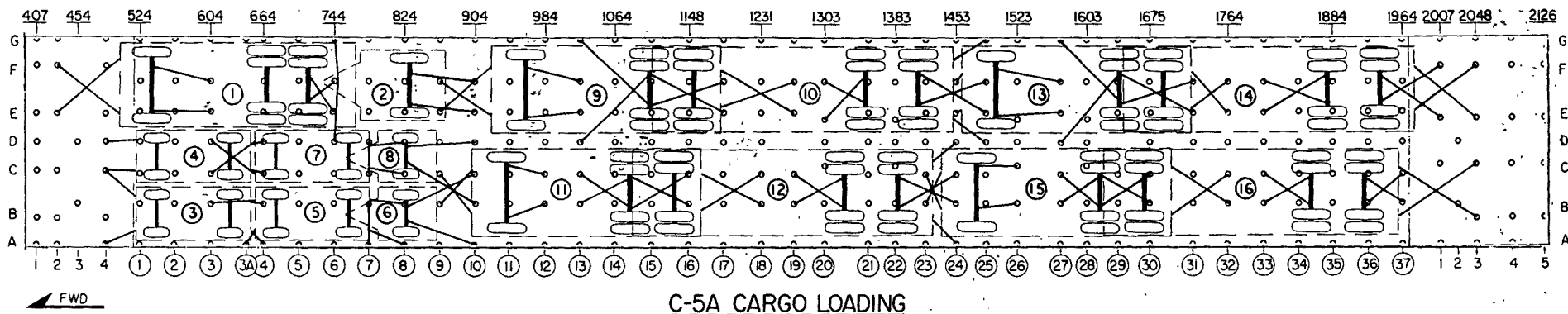
b. Procedure. Tie down the items in accordance with the instructions in tiedown data table 2-29 and tiedown diagram (fig 2-171).

2-231. Airplane Offloading Configuration

Airplane is level kneeled with forward ramp in drive-off mode.

2-232. Offloading Instructions

- a.* Offload the vehicles over the forward ramp.
- b.* Eighteen men offload all items in 4 minutes.



C-5A CARGO LOADING

LOAD 2-29

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP RP	STA	WEIGHT	CUBE	REMARKS
1 TRUCK, CARGO, 2 1/2-TON WQW M35A2	FWD	FRONT	505	13,530	1,693	
2 TRAILER, 1 1/2-TON (WATER) M149	FWD	REAR	870	2,410	603	SHORING REQUIRED
3 TRUCK, UTILITY, 1/4-TON M51A1	FWD	FRONT	520	2,350	370	
4 TRUCK, UTILITY, 1/4-TON M51A1	FWD	FRONT	520	2,350	370	
5 TRUCK, UTILITY, 1/4-TON M51A1	FWD	FRONT	655	2,350	370	
6 TRAILER, CARGO, 1/4-TON M416	FWD	REAR	860	590	170	SHORING REQUIRED
7 TRUCK, UTILITY, 1/4-TON M51A1	FWD	FRONT	655	2,350	370	
8 TRAILER, CARGO, 1/4-TON M416	FWD	REAR	860	590	170	SHORING REQUIRED
9 TRUCK, TRACTOR, 5-TON M52A2	FWD	FRONT	925	18,740	1,770	
10 SEMITRAILER, STAKE, 12-TON M127A1	FWD	REAR	1,450	10,080	2,503	
11 TRUCK, TRACTOR, 5-TON M52A2	FWD	FRONT	900	18,740	1,770	
12 SEMITRAILER, STAKE, 12-TON M127A1	FWD	REAR	1,425	10,080	2,503	
13 TRUCK, TRACTOR, 5-TON M52A2	FWD	FRONT	1,460	18,740	1,770	
14 SEMITRAILER, STAKE, 12-TON M127A1	FWD	REAR	1,980	10,080	2,503	
15 TRUCK, TRACTOR, 5-TON M52A2	FWD	FRONT	1,435	18,740	1,770	
16 SEMITRAILER, STAKE, 12-TON M127A1	FWD	REAR	1,960	10,080	2,503	
TOTALS				141,800	21,208	

Figure 2-171. Tiedown diagram for load 2-29.

Table 2-29. Tiedown Data for Load 2-29

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E2 (fwd ramp)	1	25,000	Clevis at bumper RH side
	F2 (fwd ramp)	1	25,000	Clevis at bumper LH side
	E3	1	25,000	Front axle LH side
	F3	1	25,000	Front axle RH side
	E6	1	25,000	Rear axle RH side
	F6	1	25,000	Rear axle LH side
2	D6 / G6	1	5,000	Around lunette
	E10	1	10,000	Axle LH side
	F10	1	10,000	Axle RH side
3	A4 (fwd ramp)	1	10,000	Clevis at bumper LH side
	C4 (fwd ramp)	1	10,000	Clevis at bumper RH side
	A4	1	10,000	Clevis at bumperette LH side
	B4	1	10,000	Clevis at bumperette RH side
4	C4 (fwd ramp)	1	10,000	Clevis at bumper LH side
	D4(fwd (fwd ramp)			Clevis at bumper RH side
	C4	1	10,000	Clevis at bumperette LH side
	D4	1	10,000	Clevis at bumperette RH side
5	A3A	1	10,000	Clevis at bumper LH side
	B3	1	10,000	Clevis at bumper RH side
	A8	1	10,000	Clevis at bumperette LH side
	B8	1	10,000	Clevis at bumperette RH side
6	A7BC	1	5,000	Around lunette
	A10	1	10,000	Axle LH side
	C10	1	10,000	Axle RH side
7	C3	1	10,000	Clevis at bumper RH side
	D3	1	10,000	Clevis at bumper LH side
	C8	1	10,000	Clevis at bumperette LH side
	D8	1	10,000	Clevis at bumperette RH side
8	C7 / D7	1	5,000	Around lunette
	B10	1	10,000	Axle LH side
	D10	1	10,000	Axle RH side
9	E9	1	25,000	Clevis at bumper RH side
	F9	1	25,000	Clevis at bumper LH side
	E13	1	25,000	Front axle LH side
	F13	1	25,000	Front axle RH side
	D13	2	25,000	Front rear axle RH side
	G13	2	25,000	Front rear axle LH side
	E17	1	25,000	Front rear axle RH side
	F17	1	25,000	Front rear axle LH side
	E19	1	25,000	Rear clevis RH side
	F19	1	25,000	Rear clevis LH side
10	E20	1	25,000	Front axle RH side
	F20	1	25,000	Front axle LH side
	E25	1	25,000	Rear axle RH side
	F25	1	25,000	Rear axle LH side
	D25	1	25,000	Rear clevis LH side
	G25	1	25,000	Rear clevis RH side

Table 2-29—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
11	B9	1	25,000	Clevis at bumper RH side
	C9	1	25,000	Clevis at bumper LH side
	B12	1	25,000	Front axle LH side
	C12	1	25,000	Front axle RH side
	B13	1	25,000	Front rear axle RH side
	C13	1	25,000	Front rear axle LH side
	B16	1	25,000	Front rear axle RH side
	C16	1	25,000	Front rear axle LH side
	B18	1	25,000	Rear clevis RH side
	C18	1	25,000	Rear clevis LH side
12	B19	1	25,000	Front axle RH side
	C19	1	25,000	Front axle LH side
	B24	1	25,000	Rear axle RH side
	C24	1	25,000	Rear axle LH side
	A24	1	25,000	Rear clevis LH side
	D24	1	25,000	Rear clevis RH side
13	E24	1	25,000	Clevis at bumper LH side
	F24	1	25,000	Clevis at bumper RH side
	E27	1	25,000	Front axle LH side
	F27	1	25,000	Front axle RH side
	D27	2	25,000	Front rear axle RH side
	G27	2	25,000	Front rear axle LH side
	E31	1	25,000	Front rear axle RH side
	F31	1	25,000	Front rear axle LH side
	E32	1	25,000	Rear clevis RH side
	F32	1	25,000	Rear clevis LH side
14	E33	1	25,000	Front axle RH side
	F33	1	25,000	Front axle LH side
	E1	1	25,000	Rear axle RH side
	(aft ramp)			
	F1	1	25,000	Rear axle LH side
	(aft ramp)			
	E3	1	25,000	Rear clevis RH side
	(aft ramp)			
	F3	1	25,000	Rear clevis LH side
	(aft ramp)			
15	B23	1	25,000	Clevis at bumper LH side
	C23	1	25,000	Clevis at bumper RH side
	B26	1	25,000	Front axle LH side
	C26	1	25,000	Front axle RH side
	B27	1	25,000	Front rear axle RH side
	C27	1	25,000	Front rear axle LH side
	B30	1	25,000	Front rear axle RH side
	C30	1	25,000	Front rear axle LH side
	B32	1	25,000	Rear clevis RH side
	C32	1	25,000	Rear clevis LH side
16	B33	1	25,000	Front axle RH side
	C33	1	25,000	Front axle LH side
	B37	1	25,000	Rear axle RH side
	C37	1	25,000	Rear axle LH side
	B3	1	25,000	Rear clevis RH side
	(aft ramp)			
	C3	1	25,000	Rear clevis LH side
	(aft ramp)			

Section XXX. LOAD 2-30: ONE TRACTOR, FULL TRACK, DIESEL D7E; TWO TRUCK, CARGO, 2½-TON M35A2; ONE TRAILER, CARGO 1½-TON M105A2; ONE TRAILER, TANK, WATER 400 GAL M149; ONE TRUCK, CARGO, ¼-TON M151A1; ONE TRAILER, CARGO, ¼-TON M416; EIGHTEEN LOADED 463L PALLETS (FIG 2-172)

NOTE

This load configuration reflects design aircraft load and may require altering for reduced ACL.

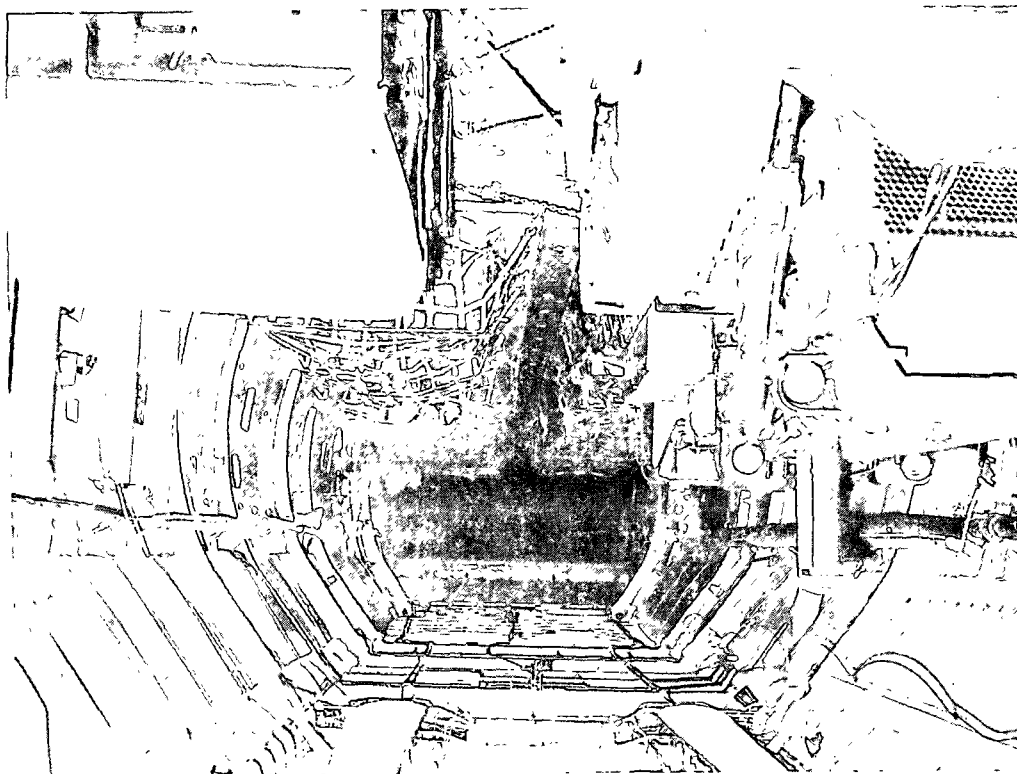


Figure 2-172. Interior view of load in airplane cargo compartment.

2-233. Airplane Loading Configuration

Airplane level kneeled with aft ramp in drive-in mode.

2-234. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-235. Materiel

Sufficient 2-inch thick by 1- by 16-foot lumber to lay a driveway 100 feet from the aft ramp toes into the cargo compartment to station 1005 in loading the D7 tractor. A lesser amount of shoring is required for this operation if the shoring is "leap-frogged" as the vehicle is moved into the airplane. One piece of 2- by 12-inch by 12-foot shoring to positions under tractor blade.

2-236. Personnel and Duties

Four men load each truck and trailer into the airplane in 2 minutes. One man drives the vehicle,

two men act as guides, and the fourth man signals directions during loading. Eight men load the D7E tractor in 20 minutes. One man drives the tractor, six men act as guides and position shoring, and the eighth man signals directions during loading and assist in positioning shoring. Eight men load the 463L pallets in 12 minutes. One man operates the K-loader and seven men transfer the pallets from the K-loader to the ramp.

2-237. Loading Instructions

a. Drive each truck-trailer combination into the cargo compartment over the aft ramp and park each vehicle at station prescribed in the tiedown diagram (fig 2-173).

b. Position shoring on right-hand-side driveway from aft ramp toes into the cargo compartment.

c. Drive the D7E tractor into the cargo compartment and park with vehicle at station prescribed in the tiedown diagram (fig 2-173).

Position shoring under tractor blade as shown in figure 2-174.

d. Prepare the 463L rail system and load the eighteen 463L pallets over the aft ramp.

2-238. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the vehicles in 20 minutes. Eight men load the 463L pallets in 12 minutes.

b. *Procedure.* Tie down all items in accordance with the instructions in tiedown diagram (fig 2-

173), tiedown data table 2-30, and figures 2-175 and 2-176.

2-239. Airplane Offloading Configuration

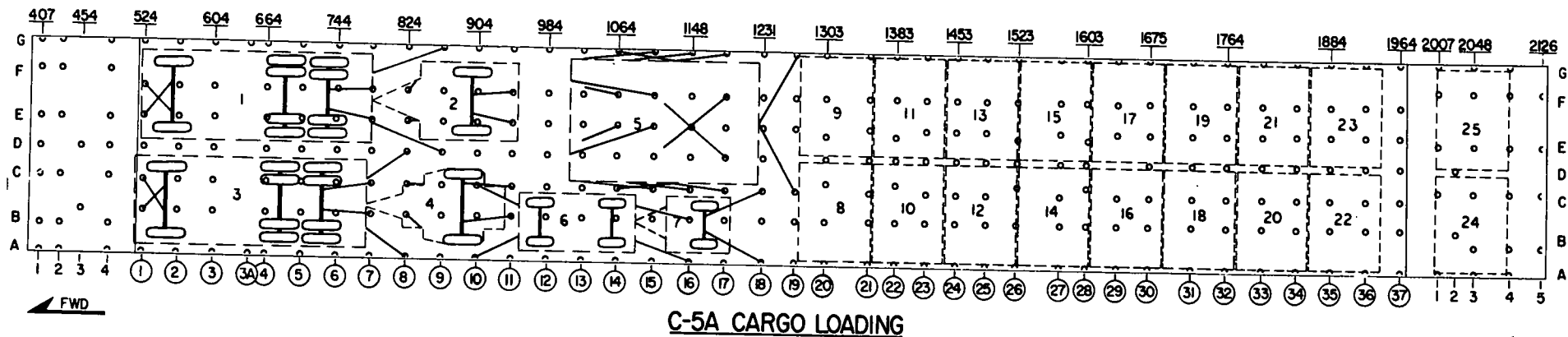
Forward ramp in drive-off mode, aft ramp at truck bed height, and airplane level kneeled.

2-240. Offloading Instructions

a. Offload all vehicles over forward ramp using driveway shoring for the D7E tractor.

b. Offload the 463L pallets from the aft ramp.

c. Eight men offload the load in 15 minutes.



LOAD 2-30

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	STA			
1 TRUCK, CARGO, 2 1/2-TON, 6x6, WOVN, M35A2	FWD	FRONT	520	13,530	1,093	
2 TRAILER, CARGO, 1 1/2-TON, M105A2	FWD	REAR	955	2,750	781	
3 TRUCK, CARGO, 2 1/2-TON, 6x6, WOVN, M35A2	FWD	FRONT	510	13,530	1,093	
4 TRAILER, 1 1/2-TON (WATER), M109	FWD	REAR	930	2,410	603	
5 TRACTOR, FULL TRACK, DIESEL, D-7IE	FWD	FRONT	1,005	51,600	1,509	SHORING REQUIRED
6 TRUCK, UTILITY, 1 1/4-TON, 4x4, M151A1	FWD	FRONT	950	2,350	370	
7 TRAILER, CARGO, 1 1/4-TON, M406	FWD	REAR	1,185	980	170	
8 THRU 25 PALLETS, 463L (18 EACH)		STA 1275 THROUGH AFT RAMP		90,000	3,600	

TOTALS

176,260 10,419

Figure 2-173. Tiedown diagram for load 2-30.

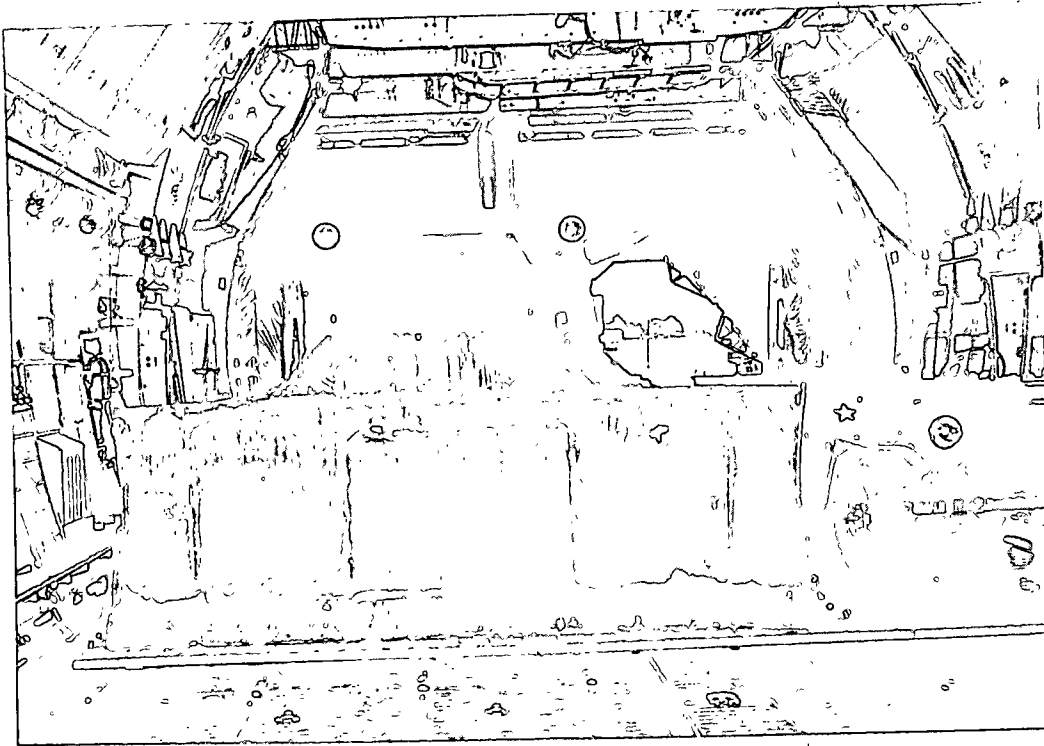


Figure 2-174. Positioning of shoring under the D7E tractor blade.

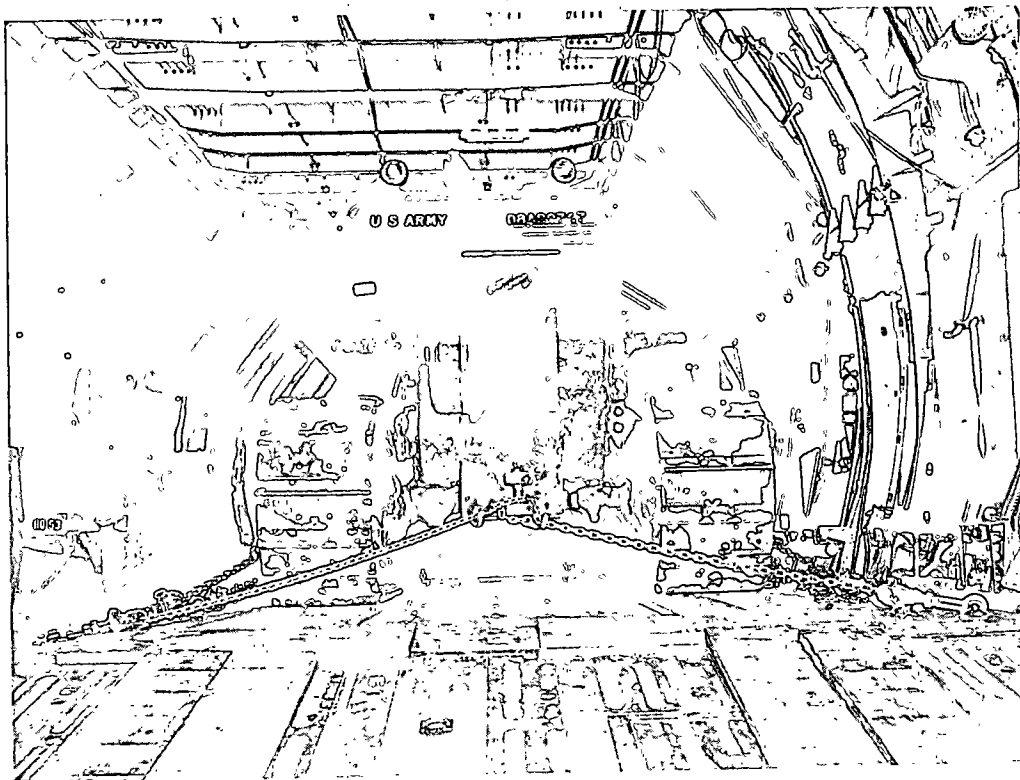


Figure 2-175. Tiedown at rear of the D7E tractor.



Figure 2-176. Tiedown on left side of the D7E tractor.

Table 2-30. Tiedown Data for Load 2-30

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E1	1	25,000	Front axle RH side
	F1	1	25,000	Front axle LH side
	E7	1	25,000	Rear axle LH side
	F7	1	25,000	Rear axle RH side
	D9	1	25,000	Clevis at bumperette LH side
	G9	1	25,000	Clevis at bumperette RH side
	E4	1	25,000	Clevis at bumper LH side
	(fwd ramp) F4	1	25,000	Clevis at bumper RH side
	(fwd ramp)	5,000		
2	E8	1	10,000	Ring on lunette LH side
	F8	1	10,000	Ring on lunette RH side
	E11	1	10,000	Axle LH side
	F11	1	10,000	Axle RH side
3	B1	1	25,000	Front axle RH side
	C1	1	25,000	Front axle LH side
	B7	1	25,000	Rear axle LH side
	C7	1	25,000	Rear axle RH side
	A8	1	25,000	Clevis at bumperette LH side
	D8	1	25,000	Clevis at bumperette RH side
	B4	1	25,000	Clevis at bumper LH side
	(fwd ramp) C4	1	25,000	Clevis at bumper RH side
	(fwd ramp)			
4	B8	1	10,000	Frame LH side front
	C8	1	10,000	Frame RH side front
	B11	1	10,000	Axle LH side
	C11	1	10,000	Axle RH side

Table 2-30—Continued

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
5	C14	1	25,000	Middle tiedown ring LH side
	G14	1	25,000	Middle tiedown ring RH side
	E14	1	25,000	Hydra lift attach points on blade LH side
	F14	1	25,000	Hydra lift attach points on blade LH side
	E15	1	25,000	Front tow hitch LH side
	F15	1	25,000	Front tow hitch RH side
	C15	1	25,000	Blade support arm LH side
	G15	1	25,000	Blade support arm RH side
	C16	1	25,000	Front tiedown ring LH side
	G16	1	25,000	Front tiedown ring RH side
	C17	1	25,000	Middle tiedown ring LH side
	G17	1	25,000	Middle tiedown ring RH side
	E17	1	25,000	Y bar under vehicle RH side
	F17	1	25,000	Y bar under vehicle LH side
	C19	1	25,000	Rear hitch
	G19	1	25,000	Rear hitch
6	A10	1	10,000	Clevis at bumper LH side
	C10	1	10,000	Clevis at bumper RH side
	A16	1	10,000	Clevis at bumperette LH side
	B16	1	10,000	Clevis at bumperette RH side
7	A18	1	10,000	Axle LH side
	C18	1	10,000	Axle RH side
8	Through	24	Eighteen	463 L pallets

Section XXXI.

LOAD 2-31. TWO TRUCK, DUMP, 2½-TON M343A2; ONE CRANE, TRUCK MOUNTED 20-TON ROUGH TERRAIN M20B; ONE TRUCK, TRACTOR, 5-TON M52A2; ONE SEMITRAILER, LOW BED, 25-TON M172A1; ONE TRUCK, UTILITY, ¼-TON M151A1; ONE TRAILER, CARGO, ¼-TON M416 (FIG 2-177)



Figure 2-177. Vehicle lineup for load 2-31.

2-241. Airplane Loading Configuration

Airplane forward kneeled with forward ramp in drive-in mode.

2-242. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-243. Materiel

Eight pieces of 2- by 12-inch by 12-foot lumber to be used as parking shoring for 20-ton crane.

2-244. Personnel and Duties

Four men load each vehicle into the airplane in 3 minutes. One man drives the vehicle, two men act as guides and position parking shoring, and the fourth man signals directions during loading and assist in positioning shoring for the 20-ton crane.

2-245. Loading Instructions

a. Back each vehicle into the cargo compartment over the forward ramp and park each vehicle at station prescribed in the tiedown diagram (fig 2-178).

b. Position parking shoring under wheels of 20-ton crane.

2-246. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the vehicles in 30 minutes.

b. *Procedure.* Tie down all items in accordance with instructions in tiedown diagram (fig 2-178) and tiedown data table 2-31.

2-247. Airplane Offloading Configuration

Forward ramp in drive-off mode and airplane forward kneeled.

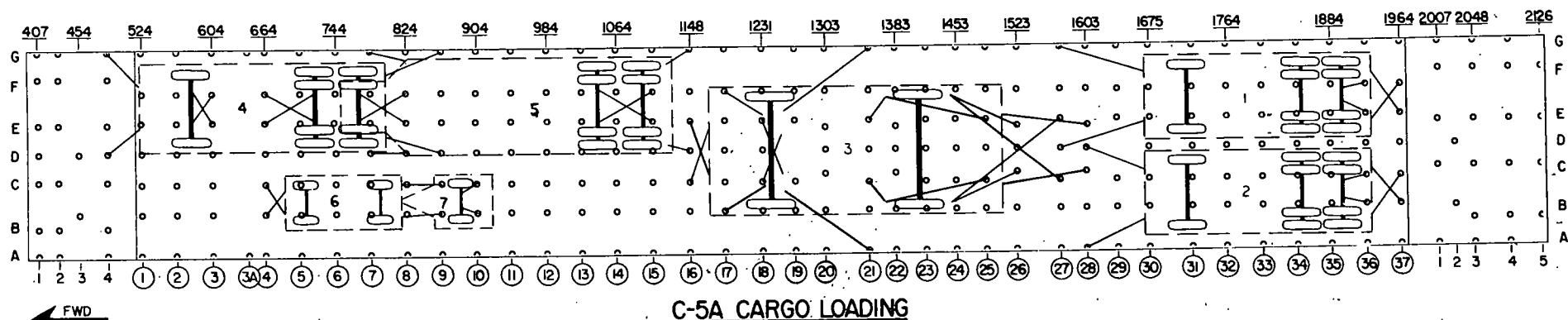
2-248. Offloading Instructions

a. Offload all vehicles over forward ramp.

b. Remove the parking shoring from the airplane.

c. Eight men offload the load in 8 minutes.

FIG 2-178



LOAD 2-31

	DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP	WEIGHT	CUBE	REMARKS
			RP STA			
1	TRUCK, DUMP, 2 1/2-TON, 6x6, M42A2	FWD	FRONT	1,670	15,260	1,486
2	TRUCK, DUMP, 2 1/2-TON, 6x6, M42A2	FWD	FRONT	1,670	15,260	1,486
3	CRANE, TRK MTD, 20-TON, M208	FWD	FRONT	1,170	61,070	3,745 SHORING REQUIRED
4	TRUCK, TRACTOR, 5-TON, W/M, M52A2	FWD	FRONT	520	18,740	1,770
5	SEMITRAILER, LOW BED, 25-TON, M172A1	FWD	REAR	1,130	16,350	2,265
6	TRUCK, UTILITY, 1/4-TON, M31A1	FWD	FRONT	485	2,350	370
7	TRAILER, CARGO, 1/4-TON, M416	FWD	REAR	920	590	170
	TOTALS			129,620	11,903	

Figure 2-178. Tiedown diagram for Load 2-31.

Table 2-31. Tiedown Data for Load 2-31.

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	E37	1	25,000	Rear clevis RH side
	F37	1	25,000	Rear clevis LH side
	E36	1	25,000	Rear axle LH side
	F36	1	25,000	Rear axle RH side
	D27	1	25,000	Clevis at bumper LH side
	G27	1	25,000	Clevis at bumper RH side
2	B37	1	25,000	Rear clevis RH side
	C37	1	25,000	Rear clevis LH side
	B36	1	25,000	Rear axle LH side
	C36	1	25,000	Rear axle RH side
	A28	1	25,000	Clevis at bumper LH side
	D28	1	25,000	Clevis at bumper RH side
3	C28	2	25,000	Rear clevis LH side
	E28	2	25,000	Rear clevis RH side
	C27	2	25,000	Ring aft of rear wheel RH side
	E27	2	25,000	Ring aft of rear wheel LH side
	C26	1	25,000	Ring aft of rear wheel LH side
	E26	1	25,000	Ring aft of rear wheel RH side
	C25	2	25,000	Ring fwd of rear wheel LH side
	E25	2	25,000	Ring fwd of rear wheel RH side
	C21	1	25,000	Ring fwd of rear wheel LH side
	E21	1	25,000	Ring fwd of rear wheel RH side
	A21	2	25,000	Boom support LH side
	G21	2	25,000	Boom support RH side
	C18	1	25,000	Ring aft of front axle RH side
	E18	1	25,000	Ring aft of front axle LH side
	B17	1	25,000	Ring above front axle LH side
	C17	1	25,000	Ring above front axle RH side
	C16	1	25,000	Front clevis RH side
	E16	1	25,000	Front clevis LH side
4	D16	1	25,000	Rear frame LH side
	G16	1	25,000	Rear frame RH side
	E15	1	25,000	Front rear axle RH side
	F15	1	25,000	Front rear axle LH side
	D7	1	25,000	Front frame LH side
	G7	1	25,000	Front frame RH side
5	D9	1	25,000	Rear clevis LH side
	G9	1	25,000	Rear clevis RH side
	E8	1	25,000	Rear axle RH side
	F8	1	25,000	Rear axle LH side
	E4	1	25,000	Front rear axle RH side
	F4	1	25,000	Front rear axle LH side
	E3	1	25,000	Front axle RH side
	F3	1	25,000	Front axle LH side
	D4 fwd	Ramp 1	25,000	Front clevis LH side
	G4 fwd	Ramp 1	25,000	Front clevis RH side
6	B10	1	10,000	Axle LH side
	C10	1	10,000	Axle RH side
7	B9	1	10,000	Clevis at bumperette LH side
	C9	1	10,000	Clevis at bumperette RH side
	B4	1	10,000	Clevis at bumper RH side
	C4	1	10,000	Clevis at bumper LH side

Section XXXII. **LOAD 2-32: ONE TRACTOR, DIESEL, MRS100; ONE ROLLER, ROAD, MODEL RF-100CE; ONE COMBAT ENGINEER VEHICLE M728; ONE TRUCK, VAN, EXPANSIBLE, 2½-TON M292A2 (FIG 2-179)**

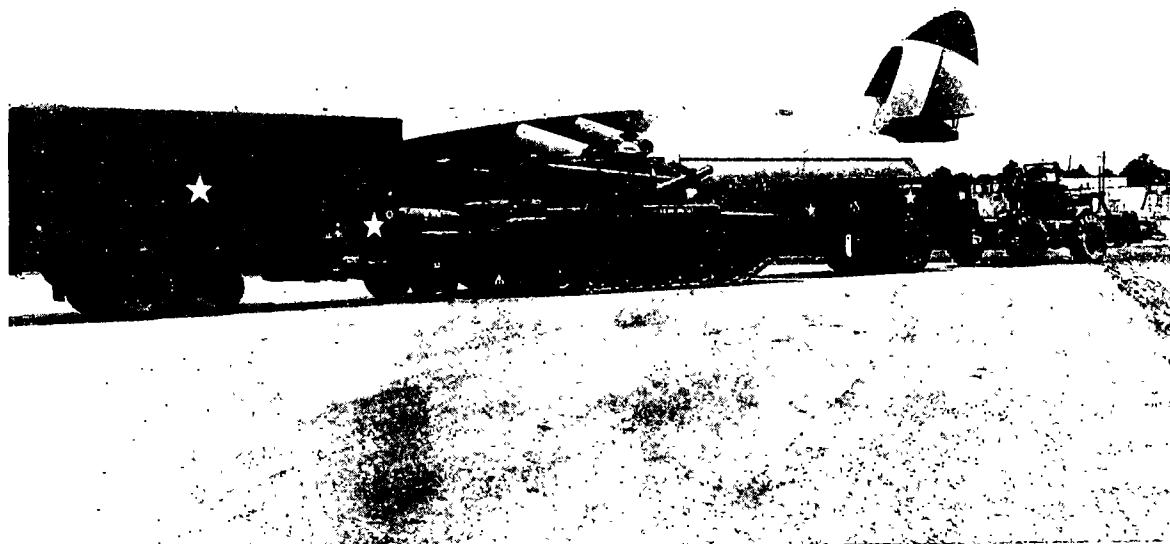


Figure 2-179. Vehicle lineup for load 2-32.

2-249. Airplane Loading Configuration

Airplane level kneeled and aft ramp in drive-in mode.

2-250. Preparing the Items

Prepare the items in accordance with instructions in paragraph 1-6.

2-251. Materiel

Four pieces of 2- by 12-inch by 16-foot lumber to place at aft ramp toes to prevent the RF-100CE roller aft bumper from striking the ground as shown in figure 2-180. Eight pieces of 2- by 12-inch by 16-foot lumber for parking shoring for the M728 engineer combat vehicle (fig 2-181). Two pieces of 2- by 12-inch by 12-foot lumber to place under the blades of the MRS100 tractor and M728 engineer combat vehicle.

2-252. Personnel and Duties

Six men load each vehicle into the airplane in 9 minutes. One man drives the vehicle, four men act as guides and position shoring, and the sixth man signals directions during loading and assists in positioning shoring.

2-253. Loading Instructions

Drive each vehicle into the cargo compartment over the aft ramp and park each vehicle at station prescribed in tiedown diagram (fig 2-182). Position the eight pieces of parking shoring for the M728. Place shoring under the blades of the M728 and MRS100 (fig 2-183).

2-254. Tiedown (See Caution in Paragraph 1-9 c)

a. *Personnel and Time.* Eight men tie down the load in 35 minutes.

b. *Procedure.* Tie down all items in accordance with instructions in the tiedown diagram (fig 2-182) tiedown data table 2-32, and figures 2-184 through 2-187.

2-255. Airplane Offloading Configuration

Forward ramp in drive-off mode with airplane level kneeled.

2-256. Offloading Instructions

a. Stack two pieces 2- by 12-inch by 16-foot lumber, for each driveway, at the forward ramp

toes when offloading the 7½-ton roller to prevent aft bumper from contacting ramp.

b. Offload each vehicle over the forward ramp.

c. Offload the shoring from the airplane.

d. Eight men offload the load in 10 minutes.

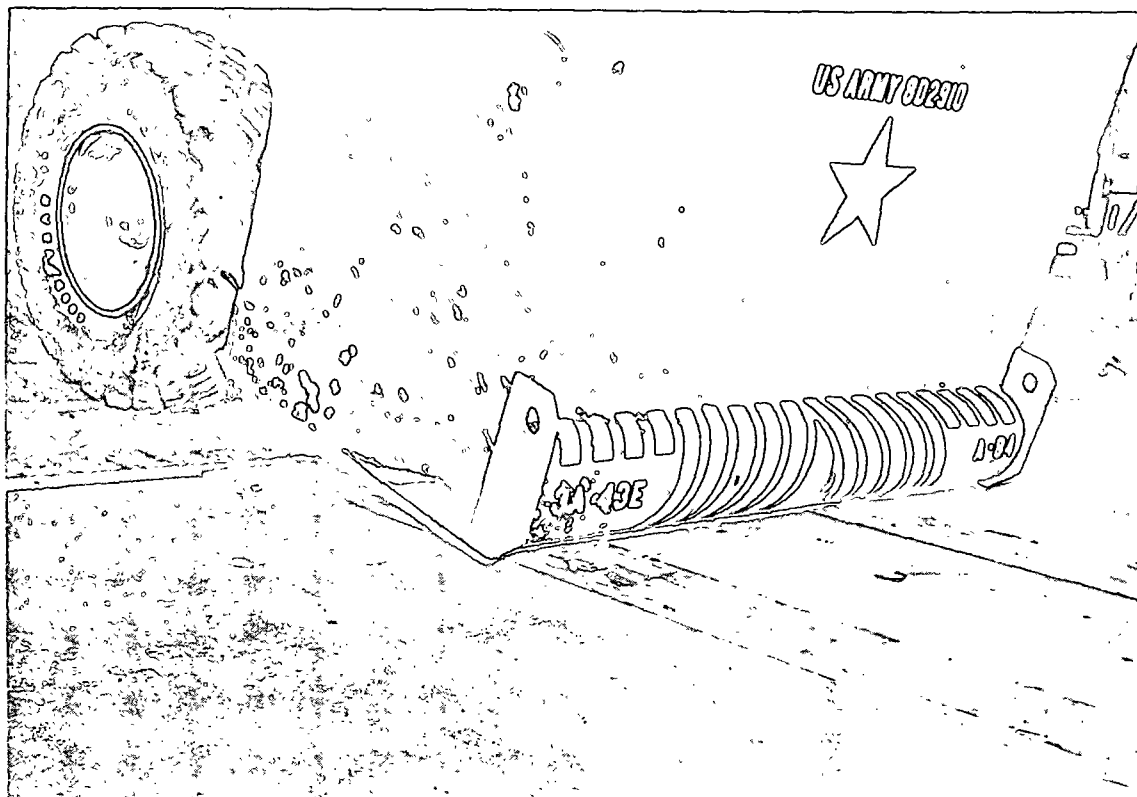


Figure 2-180. Loading the RF-100CE roller over the aft ramp. Note the position of the shoring to prevent the aft bumper from striking the ground.

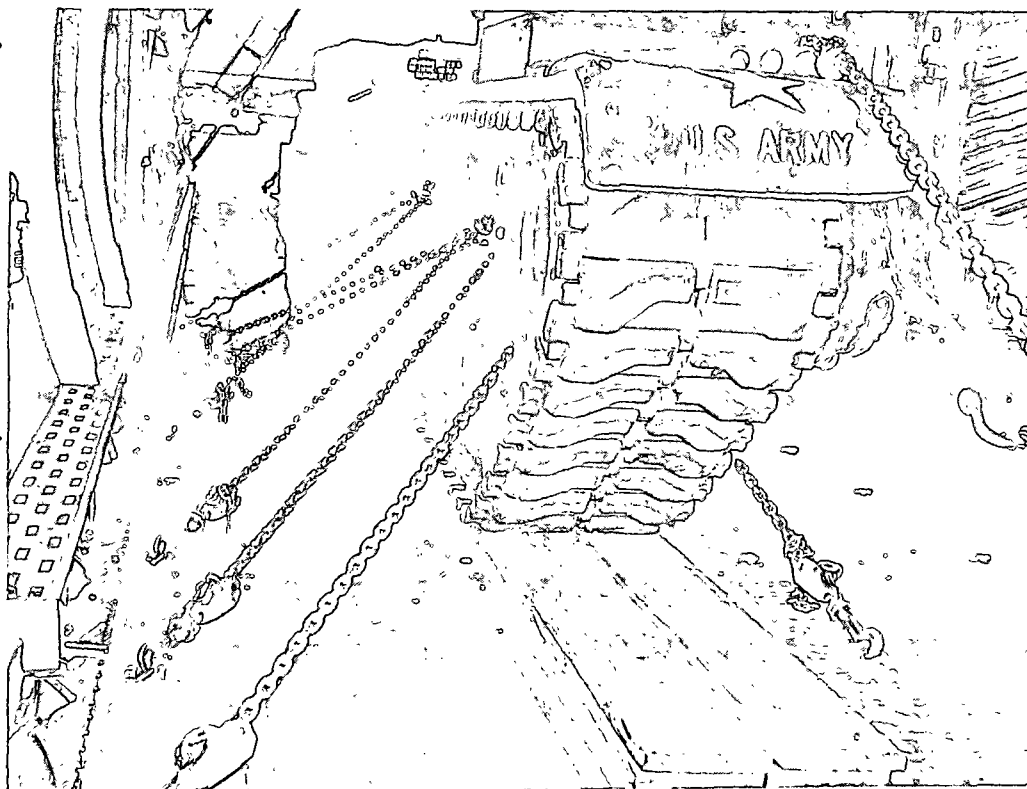
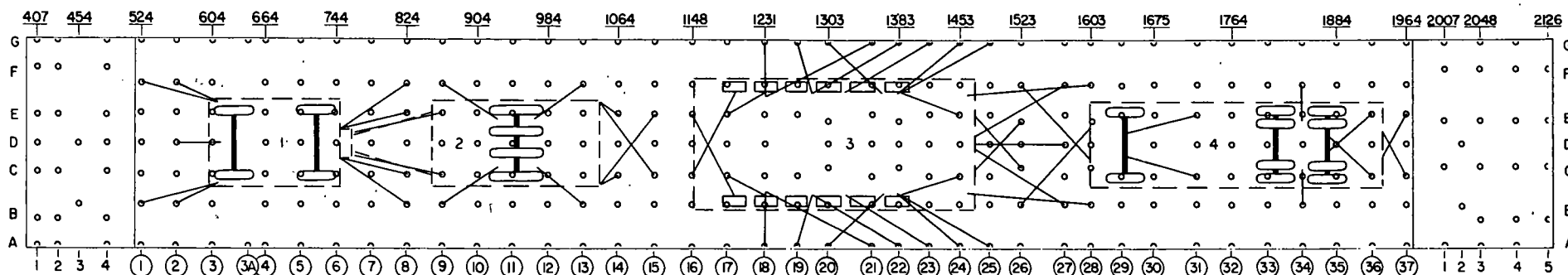


Figure 2-181. Shoring positioned for the M128 engineer combat vehicle.



C-5A CARGO LOADING

LOAD 2-32

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP RP	STA	WEIGHT	CUBE	REMARKS
1 TRACTOR, MRS100	FWD	FRONT	600	17,200	1,270	SHORING REQUIRED
2 ROLLER, TOWED, 7 1/2-TON, RT 100CE	FWD	REAR	1040	12,465	1,497	SHORING REQUIRED
3 ENGINEER COMBAT VEHICLE, M728	FWD	FRONT	1150	110,560	3,891	SHORING REQUIRED
4 TRUCK, VAN, EXPANSIBLE, 2 1/2-TON, M924Z	FWD	FRONT	1600	20,250	2,508	
TOTALS				160,475	9,166	

Figure 2-182. Tiedown diagram for load 2-32.

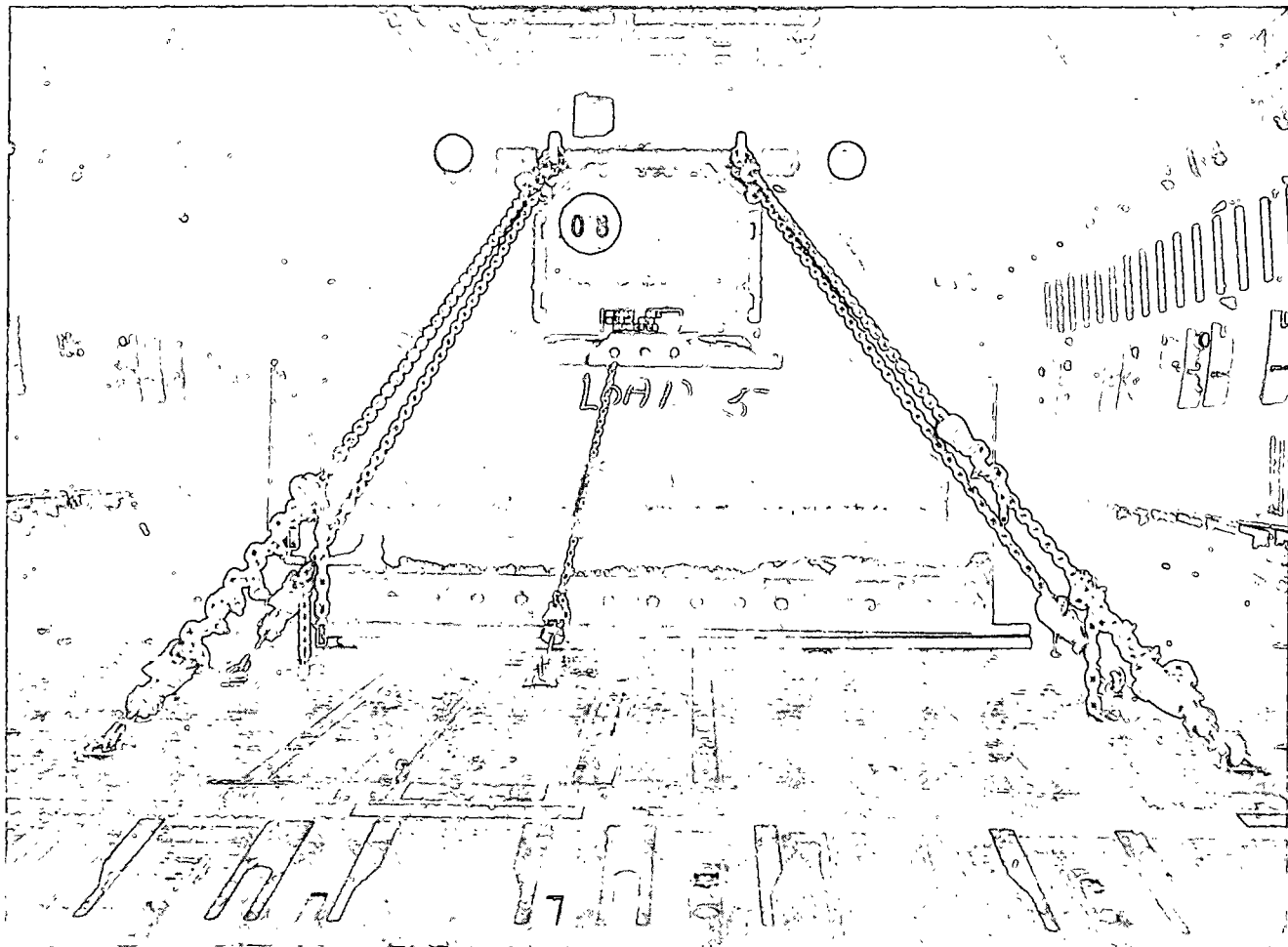


Figure 2-183. Shoring positioned under the blade of the MRS100 tractor.

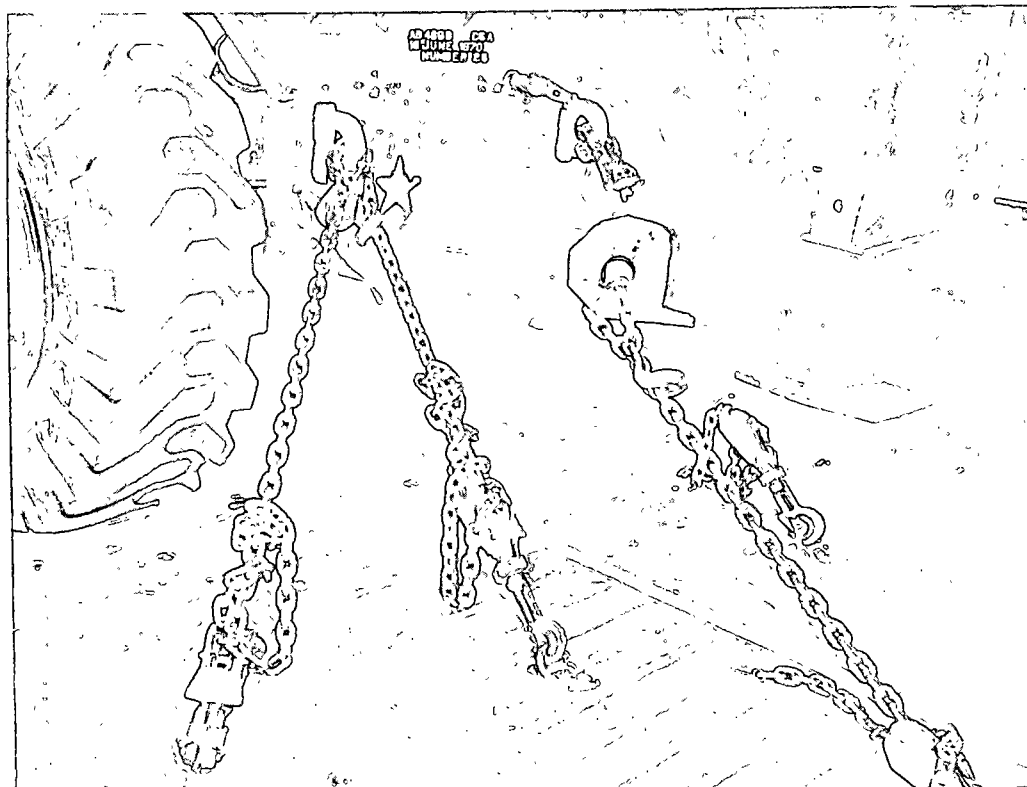


Figure 2-184. Tiedown for rear of the MRS100 tractor.

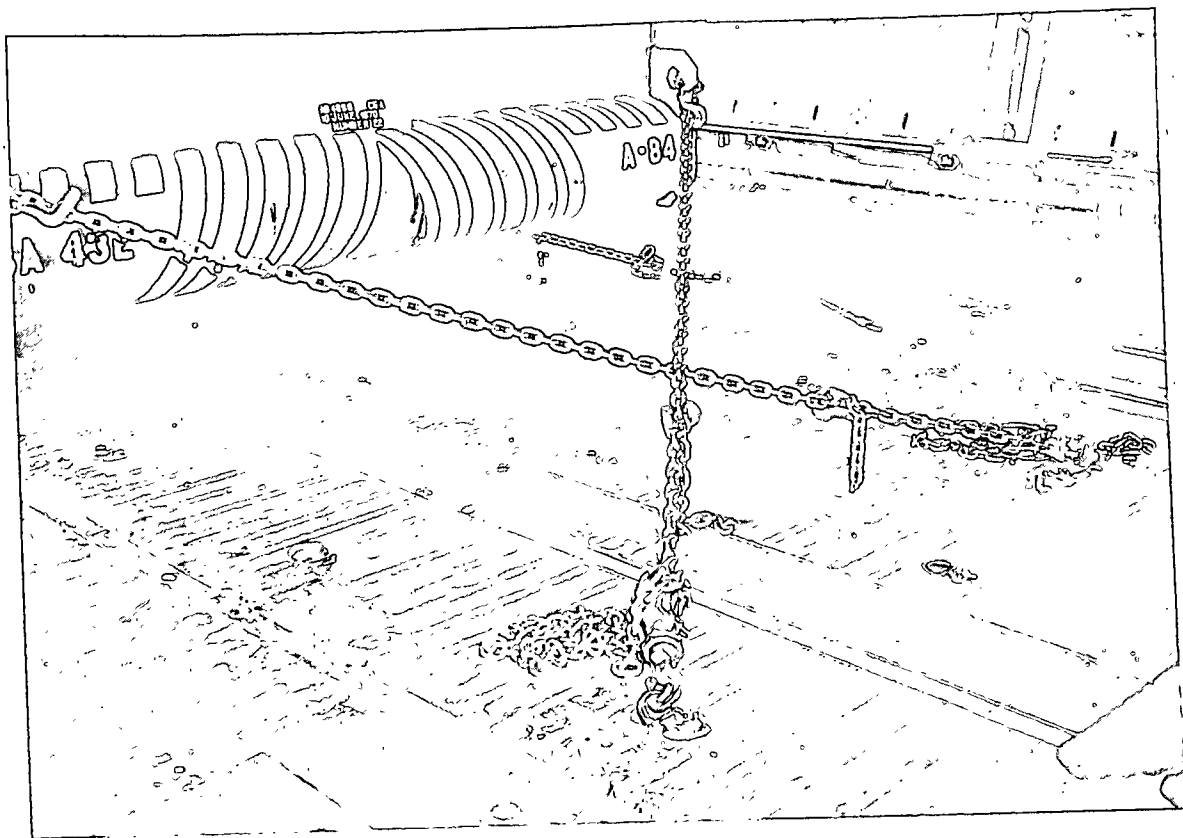


Figure 2-185. Tiedown for rear of the RF-100CE roller.

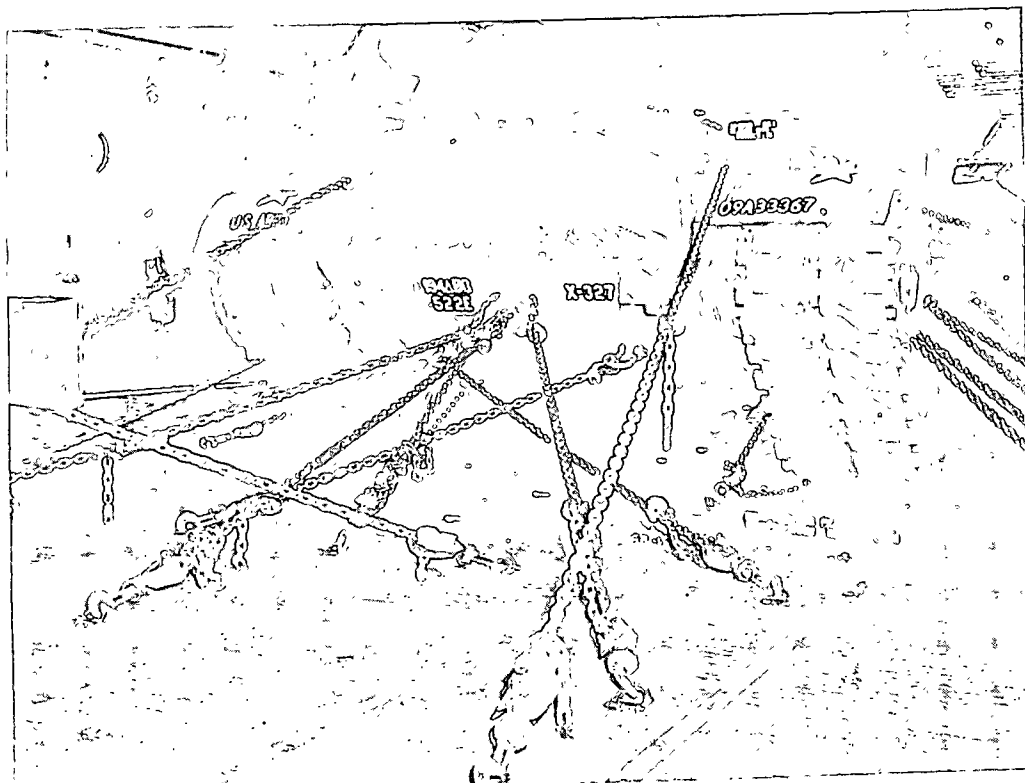


Figure 2-186. Tiedown for rear of the M728 combat engineer vehicle.

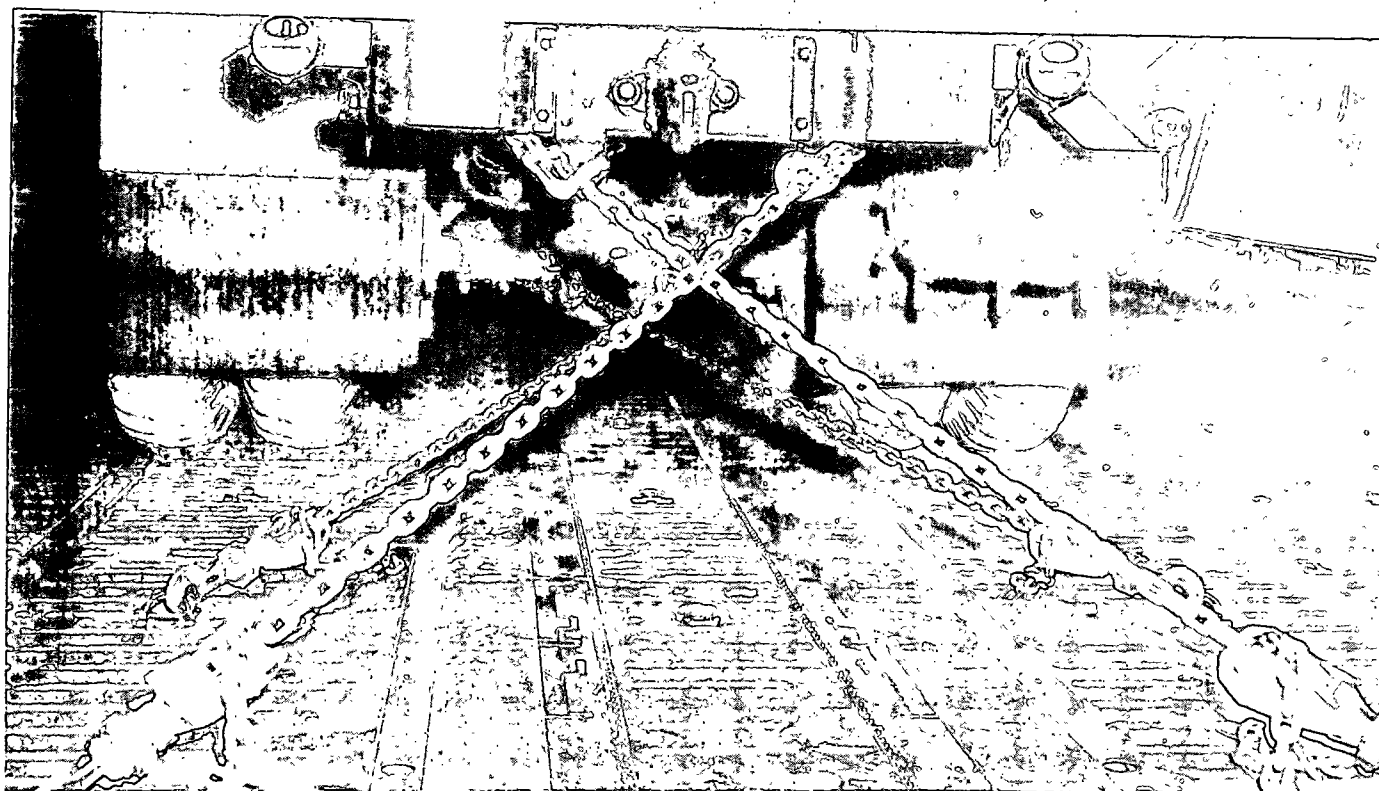


Figure 2-187. Tiedown for rear of the M292 truck van.

Table 2-32. Tiedown Data for Load 2-32

Item No.	Tiedown fitting	Quantity	Tiedown device Size	Attach to item at:
1	B1	2	25,000	Lifting eye LH side
	F1	2	25,000	Lifting eye RH side
	B2	1	25,000	Lifting eye LH side
	F2	1	25,000	Lifting eye RH side
	D2	1	10,000	Hook under radiator
	B8	2	25,000	Towing eye LH side
	F8	2	25,000	Towing eye RH side
	C8	1	25,000	Towing eye LH side
	E8	1	25,000	Towing eye RH side
2	B9	1	25,000	Frame between first and second roller LH side
	F9	1	25,000	Frame between first and second roller RH side
	C9	1	25,000	Ring on lunette LH side
	E9	1	25,000	Ring on lunette RH side
	B13	1	25,000	Frame between first and second roller LH side
	F13	1	25,000	Frame between first and second roller RH side
	C14	1	25,000	Lower tiedown ring LH side
	E14	1	25,000	Lower tiedown ring RH side
	C15	2	25,000	Lower tiedown ring RH side
	E15	2	25,000	Lower tiedown ring LH side
3	C16	1	25,000	First wheel axle RH side
	E16	1	25,000	First wheel axle LH side
	C17	1	25,000	Second wheel axle LH side
	E17	1	25,000	Second wheel axle RH side
	A18	1	25,000	Tiedown ring above second wheel LH side
	G18	1	25,000	Tiedown ring above second wheel RH side
	A19	1	25,000	Tiedown ring between third and fourth wheel LH side
	G19	1	25,000	Tiedown ring between third and fourth wheel RH side
	A20	1	25,000	Tiedown ring between fifth and sixth wheel LH side
	G20	1	25,000	Tiedown ring between fifth and sixth wheel RH side

Table 2-32—Continued

Item No.	Tiedown fitting	Tiedown device Quantity	Size	Attach to item at:
	A21	1	25,000	Tiedown ring above second wheel LH side
	G21	1	25,000	Tiedown ring above second wheel RH side
	A22	1	25,000	Tiedown ring between third and fourth wheel LH side
	G22	1	25,000	Tiedown ring between third and fourth wheel RH side
	A23	1	25,000	Tiedown ring between fourth and fifth wheel LH side
	G23	1	25,000	Tiedown ring between fourth and fifth wheel RH side
	A24	1	25,000	Tiedown ring above sixth wheel LH side
	G24	1	25,000	Tiedown ring above sixth wheel RH side
	C24	1	25,000	Sixth wheel axle LH side
	E24	1	25,000	Sixth wheel axle RH side
	A25	1	25,000	Tiedown ring above sixth wheel LH side
	G25	1	25,000	Tiedown ring above sixth wheel RH side
	C26	1	25,000	Towing shackle RH side
	E26	1	25,000	Towing shackle LH side
	D26	1	25,000	Pintle hook
	D27	2	25,000	Pintle hook
	B27	2	25,000	Pintle hook bracket LH side
	F27	2	25,000	Pintle hook bracket RH side
	B28	2	25,000	Upper lifting eye LH side
	F28	2	25,000	Upper lifting eye RH side
4	B26		25,000	Towing shackle RH side
	F26		25,000	Towing shackle LH side
	C31	1	25,000	Front axle LH side
	E31	1	25,000	Front axle RH side
	B34		25,000	Lifting eye over rear springs LH side
	F34		25,000	Lifting eye over rear springs RH side
	C36		25,000	Rear axle RH side
	E36		25,000	Rear axle LH side
	C37		25,000	Rear clevis RH side
	E37		25,000	Rear clevis LH side

Section XXXIII.

LOAD 2-33: ONE HELICOPTER ATTACK AH-1G; ONE AIRPLANE, OBSERVATION O-1; ONE AIRPLANE, UTILITY U-6A

2-257. C-5A Airplane Loading Configuration for U-6A Airplane.

Airplane forward kneeled and forward ramp in drive-in mode.

2-258. Preparing the U-6A Airplane

a. Empty and purge the wing fuel cells. If the fuselage fuel cells contain fuel, check to insure that they are not more than $\frac{3}{4}$ -full. If the cells have been drained and are to be left empty during transport, check to insure that they are purged. Provisions of TM 38-250 and TM 1-AH-1S apply.

b. Remove the FM whip antenna and store in the U-6A cabin.

c. Remove the pax / cargo doors and tie down in the U-6A cabin.

d. Remove the wings for later loading aboard the C-5 airplane.

e. Remove the wing struts and tie down in the U-6A.

f. Six maintenance personnel prepare the U-6A in a minimum of 1 hour.

2-259. Materiel for the U-6A Airplane

a. Four pieces of 2- by 12- by 54-inch lumber nailed together length-wise along their edges to form two tiedown beams as shown in figure 2-188.

b. Four pieces of 4-by 8-foot honeycomb paperboard to cushion the two wings as shown in figure 2-189.

c. Three MB-1 tiedown device chains to form the towing bridle (fig 2-190). The towing bridle is attached to the inside axle housing as shown in figure 2-191.

d. Eighty square feet of one-half-inch-thick felt padding, used under the tiedown straps passed over the wings (fig 2-189) and under the tiedown straps at the ends of the tiedown beams (fig 2-188).

e. One small bag in which to stow the small items removed during disassembly (nuts, screws, bolts, etc.).

2-260. Loading the U-6A Airplane

a. Form the towing bridle and attach the C-5 winch cable to the bridle as shown in figure 2-190.

b. Six men load the U-6A into the C-5 in 5 minutes (fig 2-192).

c. Manhandle the wings into the tiedown location in the C-5 and position on the honeycomb paperboard.

2-261. Tiedown for the U-6A Airplane (See Caution in Paragraph 1-9 c)

a. Position the tiedown beams across the U-6A cabin floor as shown in figure 2-188.

b. Tiedown the U-6A and components as shown in figures 2-188 and 2-189, figures 2-193 through 2-195, the tiedown diagram (fig 2-205), and tiedown data table 2-33.

c. Six men tie down the U-6A and components in 15 minutes.

2-262. C-5A Airplane Offloading Configuration

Airplane forward kneeled and forward ramp in drive-off mode.

2-263. Offloading Instructions for the U-6A Airplane

a. Offloading is essentially the reverse of the loading procedure except the C-5 winch is used to

brake the U-6A as it moves down the forward ramp.

b. Six men offload the U-6A and components in 5 minutes.

c. Six maintenance personnel can reassembly the U-6A in 1 hour.

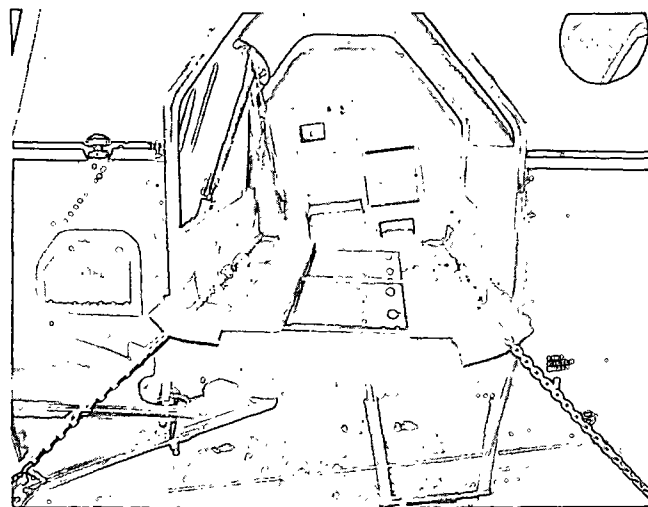


Figure 2-188. Tiedown beams constructed to restrain the U-6.

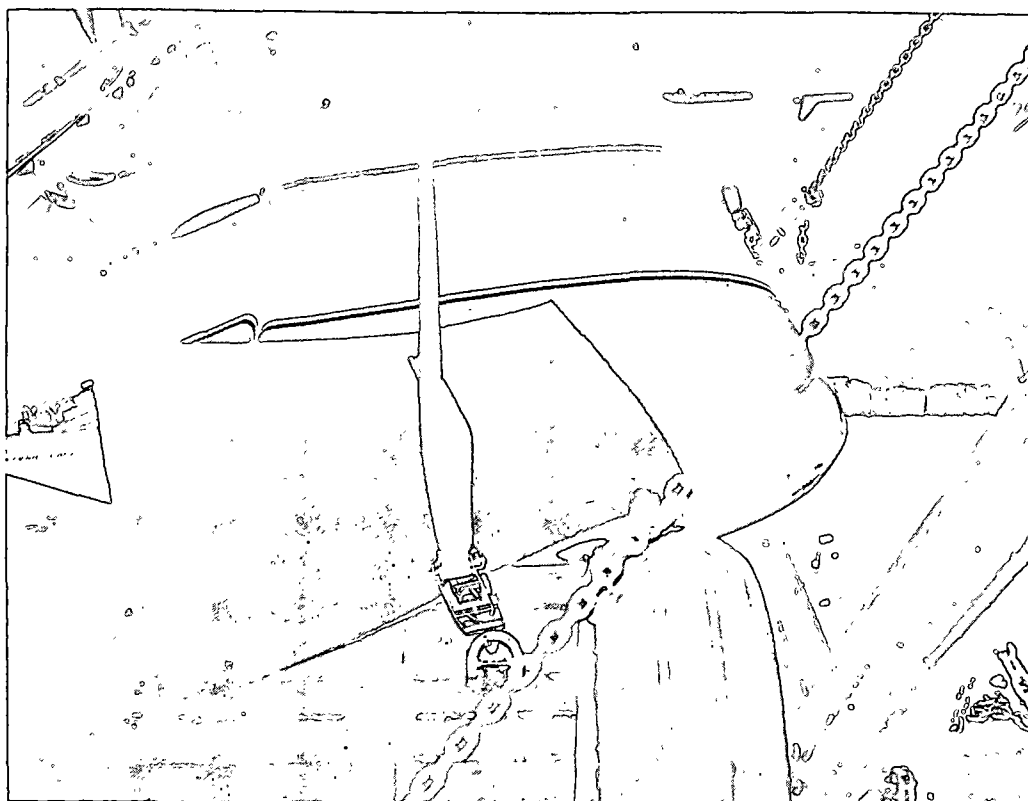


Figure 2-189. Positioning and tiedown of one U-6 wing. Note the honeycomb paperboard cushioning the wing and the felt sheets under tiedown straps.

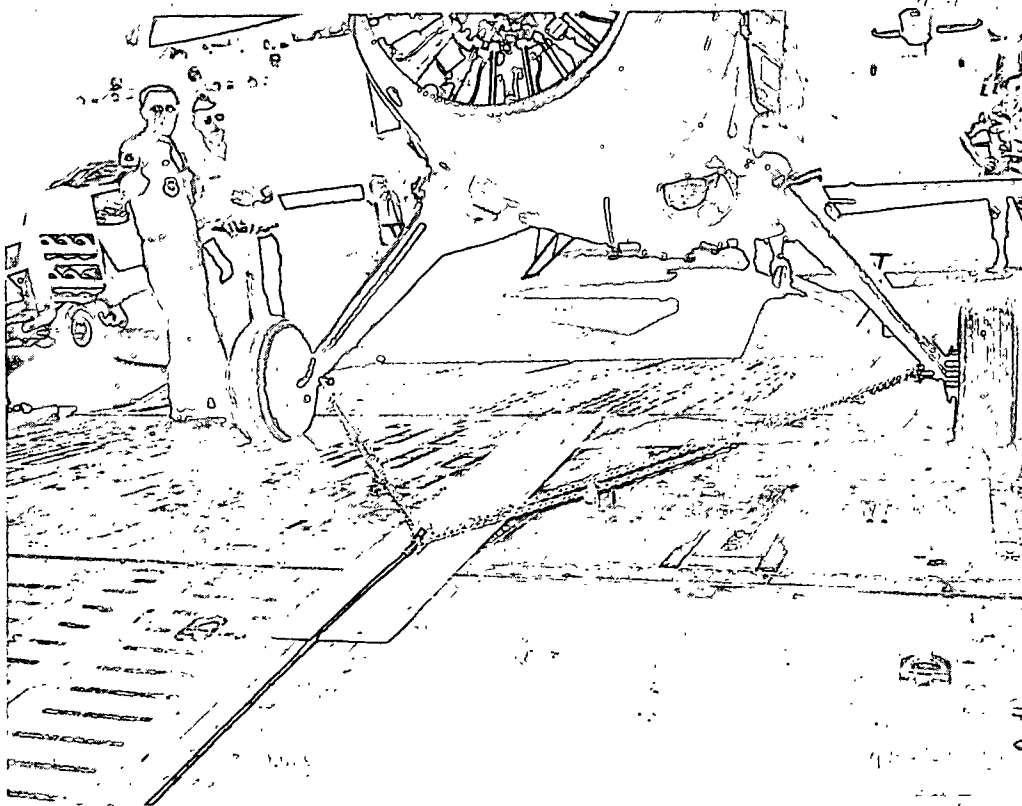


Figure 2-190. Towing the U-6 up the forward ramp. Note the plywood plank under the towing cable and formation of the towing bridle.

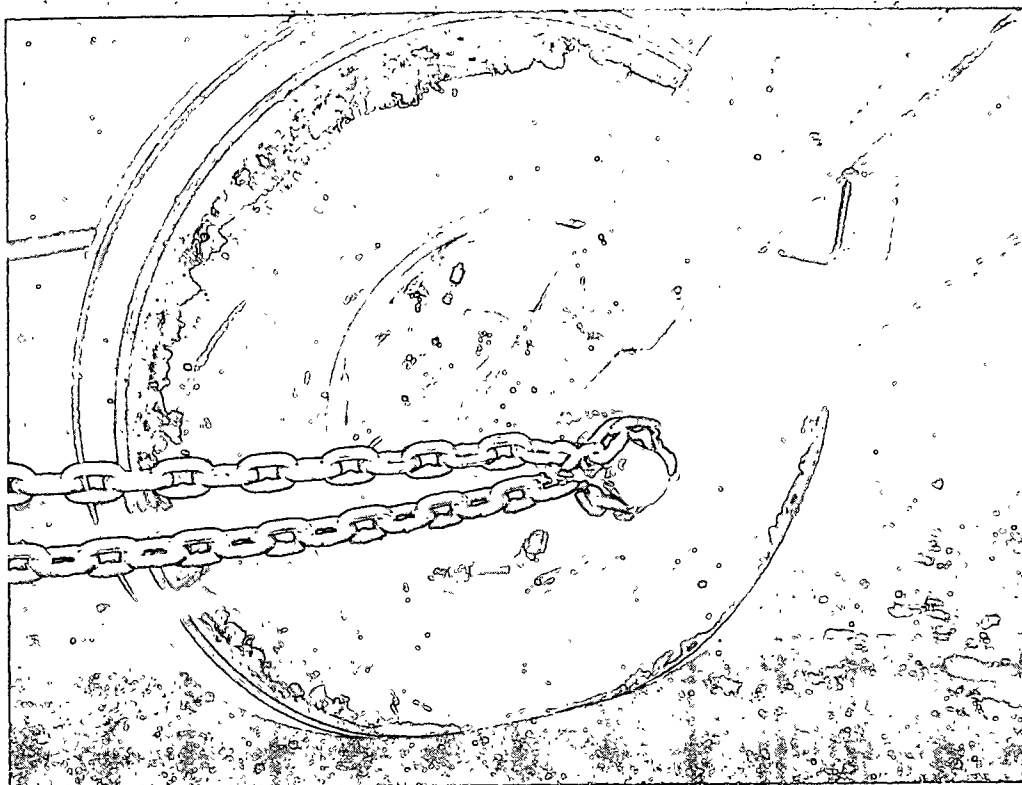


Figure 2-191. Towing bridle attached to inside axle housing of the U-6.



Figure 2-192. Loading the U-6 into the C-5 over the forward ramp.

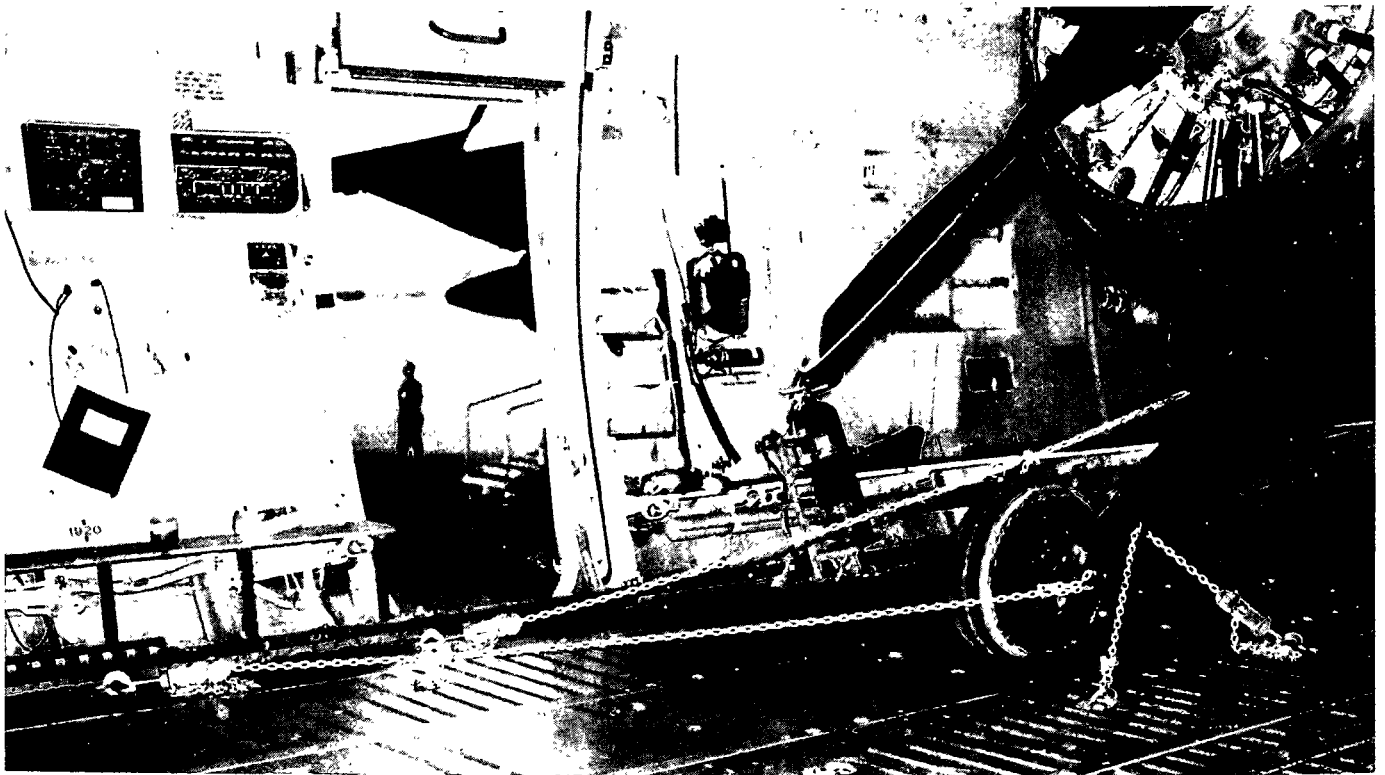


Figure 2-193. Tiedown devices attached to a jack point, an inner axle, and a tiedown beam.

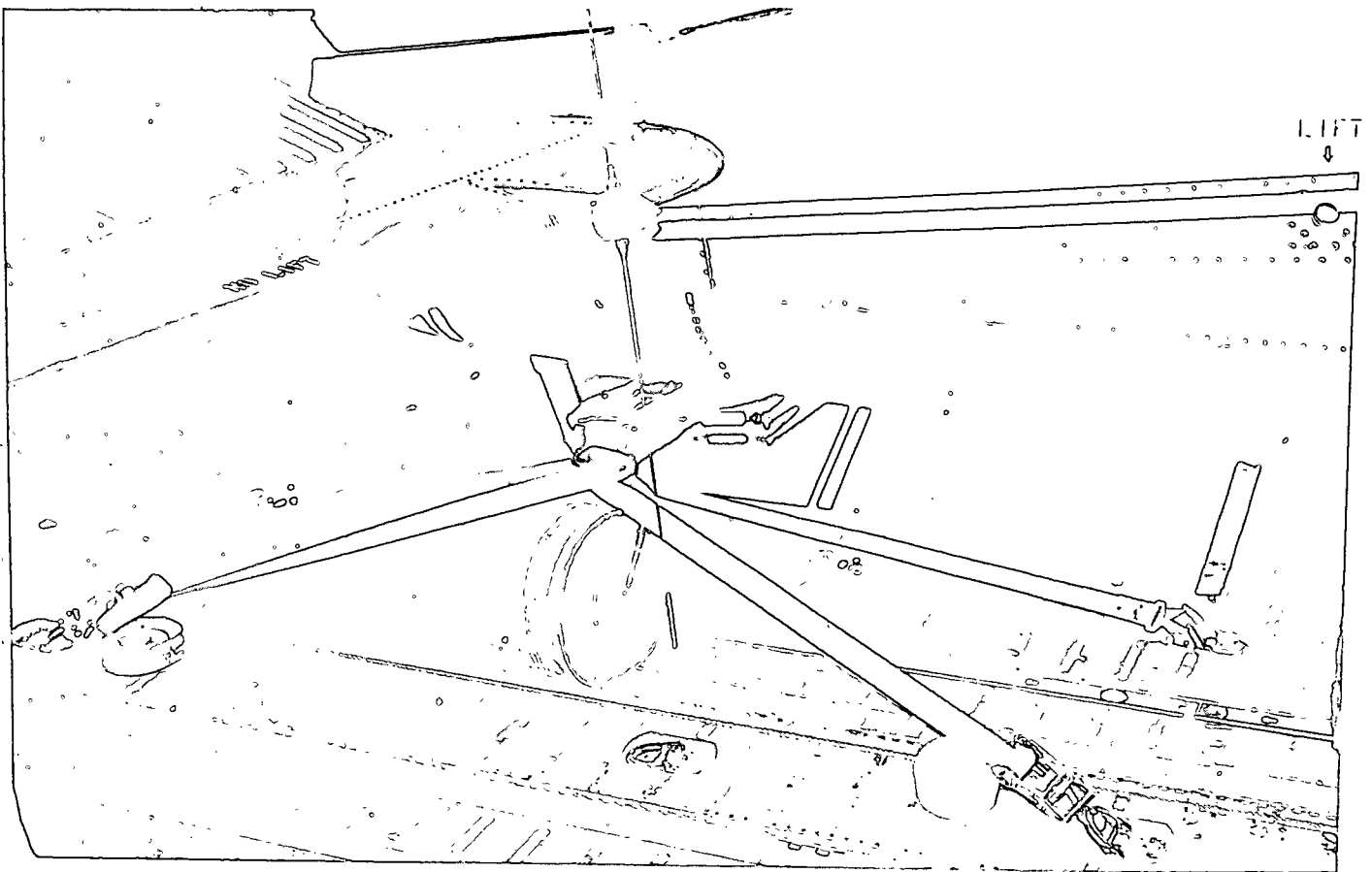


Figure 2-194. Tiedown of the tail wheel.

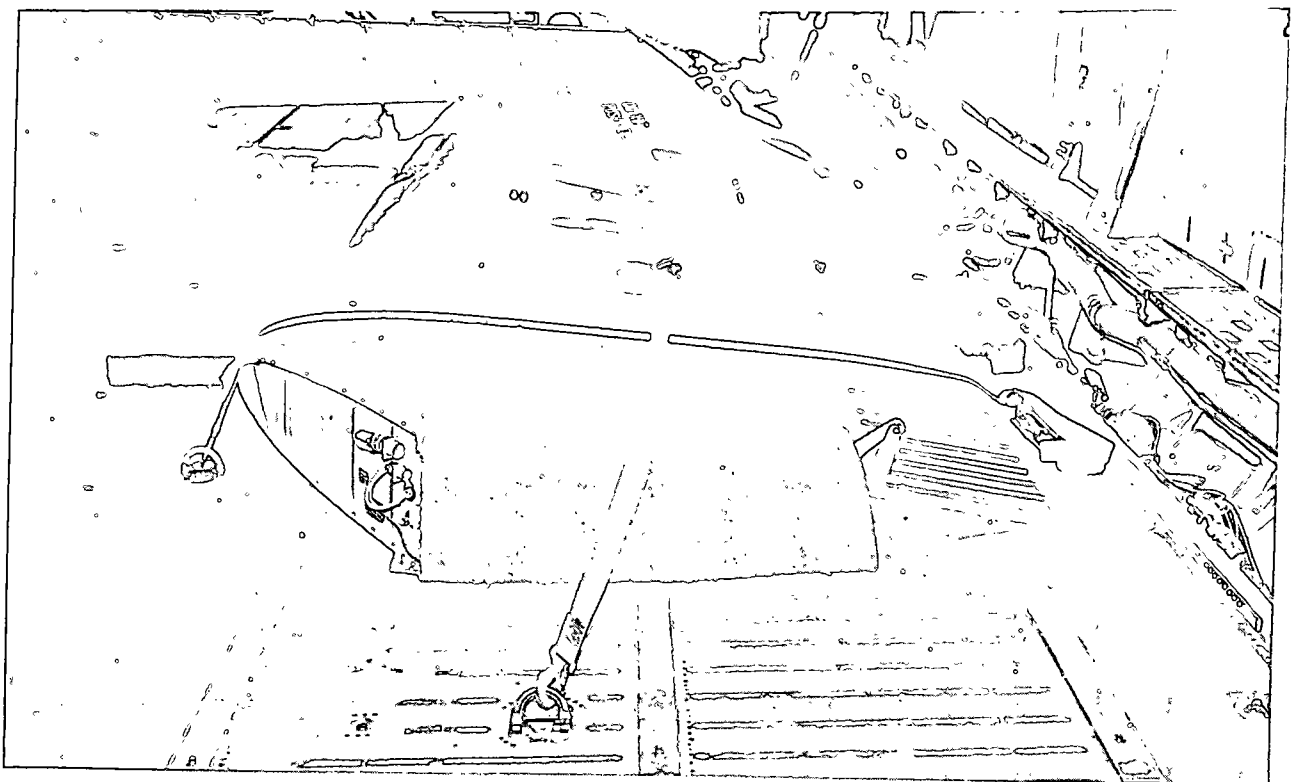


Figure 2-195. Tiedown of the right wing along side the U-6. Note location of honeycomb paperboard cushioning under the wing and of the felt padding under the tiedown straps.

2-264. C-5A Loading Configuration for O-1 Airplane

Airplane forward kneeled and forward ramp in drive-in mode.

2-265. Preparing the O-1 Airplane

- a. Empty and purge the wing fuel cells.
- b. Remove the wings, wing struts, and wing fairing.
- c. Stow the struts and fairing in the O-1 cabin.
- d. Four maintenance personnel prepare the O-1 in 40 minutes.

2-266. Materiel for the O-1 Airplane

- a. One small bag in which to stow the small items removed during disassembly (nuts, screws, bolts, etc.).
- b. Three MB-1 tiedown device chains for a towing bridle (fig 2-196).
- c. Four 3- by 6-foot pieces of honeycomb paperboard or equivalent cushioning material. Two pieces are placed under each wing for tiedown (fig 2-196).
- d. Twelve pieces of ½- by 12- by 36-inch felt sheeting or equivalent cushioning material, used under the tiedown straps widthwise over the wings and under the tiedown straps over the wing edges (fig 2-197 and 2-198).
- e. Twenty feet of 550-pound nylon cord for tiedown of the wing struts and fairing in the O-1 cabin.

2-267. Loading the O-1 Airplane

- a. Position the O-1 about 10 feet in front of the C-5 forward ramp.
- b. Form a towing bridle from the three MB-1 chains, and attach to the towing lugs of the O-1 front wheel axle assemblies (fig 2-196).
- c. Station a man on each side of the O-1 fuselage,

ahead of the empannage, and station a third man at the tail wheel to control movement of the O-1 during loading (fig 2-199).

d. Hook the C-5 winch cable to the front of the towing bridle.

e. Winch the O-1 up the ramp and into the C-5. Unhook the winch cable from the towing bridle, and manhandle the O-1 to its tiedown location (fig 2-205).

f. Position two pieces of honeycomb paperboard on the floor of the C-5 at each side of the O-1 fuselage. Four men manually load the wings into the C-5 and place on top of the paperboard (fig 2-196 and 2-200).

g. Seven men load the O-1 airplane and components in 5 minutes.

2-268. Tiedown for the O-1 Airplane (See Caution in Paragraph 1-9 c)

Tie down the O-1 and components in accordance with the instructions in tiedown table 2-33 and tiedown diagram (fig 2-205). Six men tie down the O-1 airplane and components in 5 minutes.

2-269. C-5A Airplane Offloading Configuration

Airplane forward kneeled and forward ramp in drive-off mode.

2-270. Offloading Instructions for the O-1 Airplane

a. Offloading is essentially the reverse of the loading procedure except the C-5 winch is used to brake the O-1 as it moves down the forward ramp.

b. Four men offload the O-1 and components in 5 minutes.

c. Four maintenance personnel can reassemble the O-1 in 60 minutes.

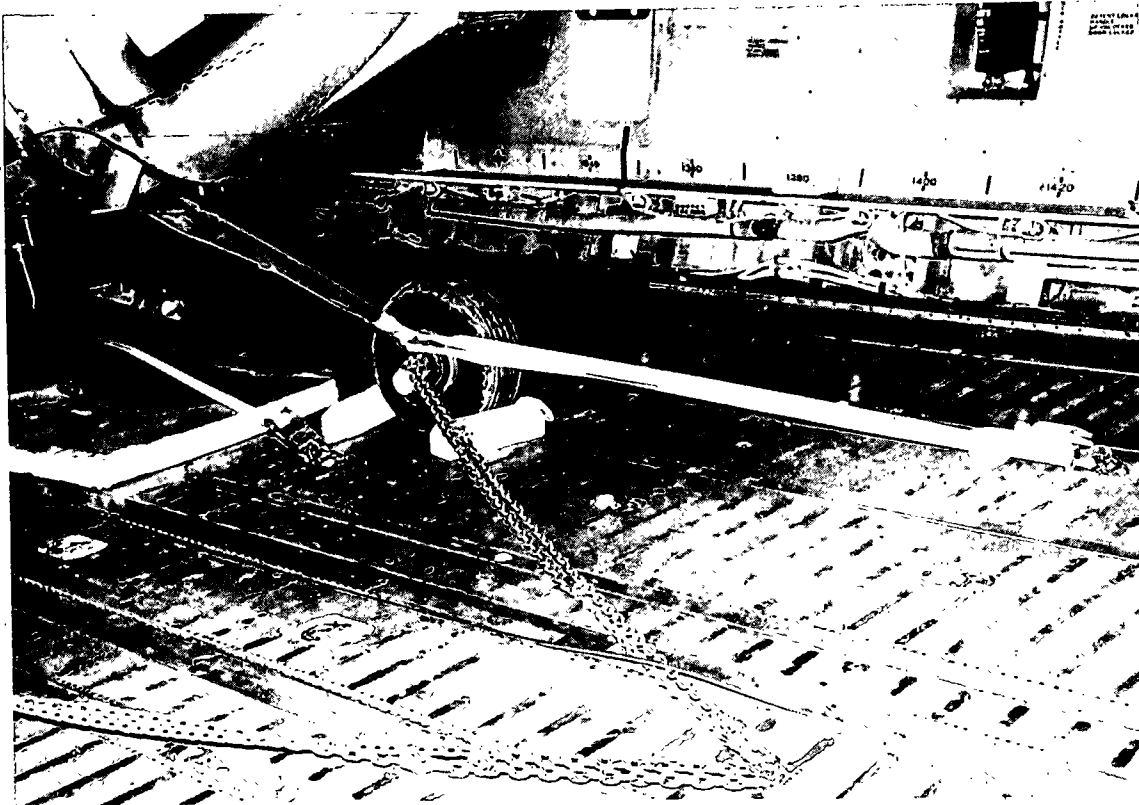


Figure 2-196. O-1 in the tiedown location. Note the towing bridle, the honeycomb paperboard cushioning under the wing, and the felt padding under the wing tiedown strap. The wheel chocks are temporary restraints which are removed after tiedown.

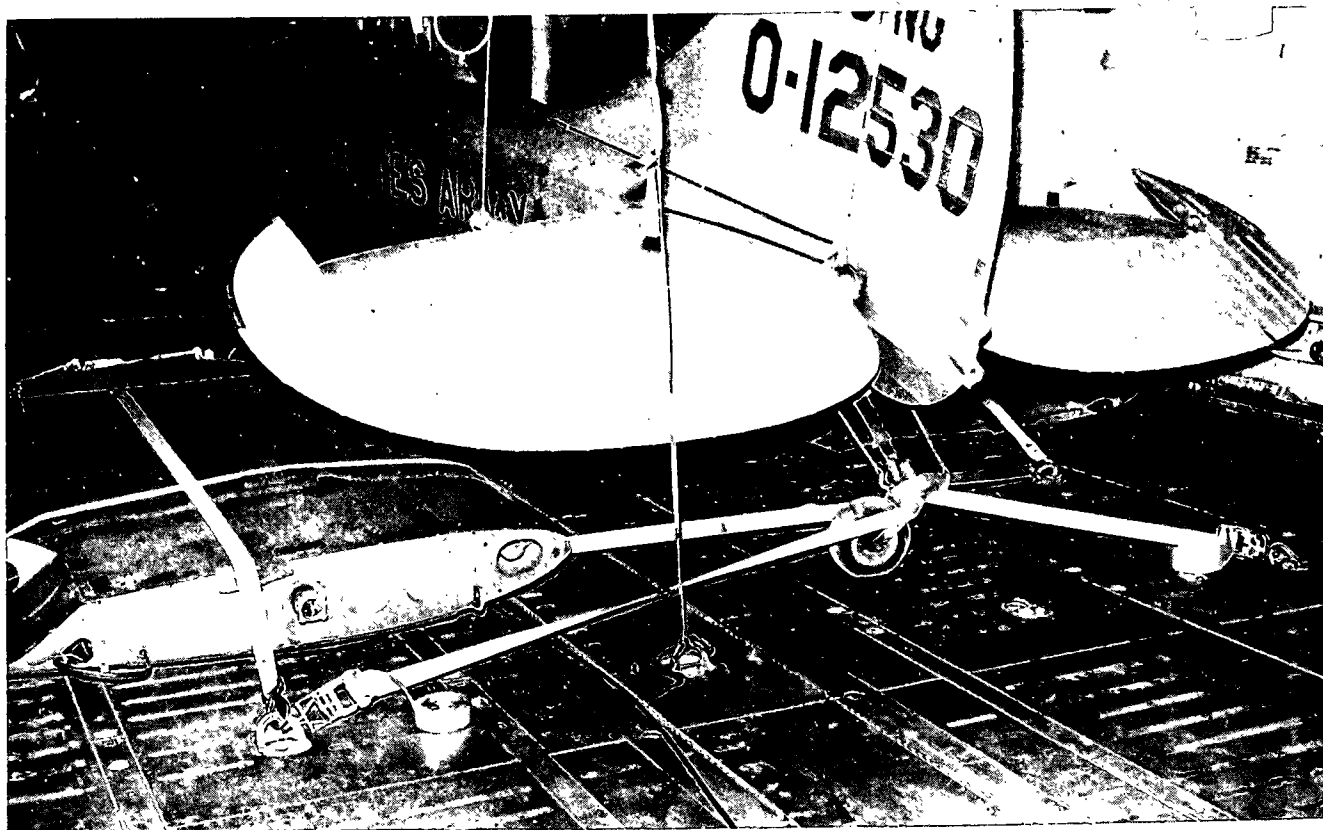
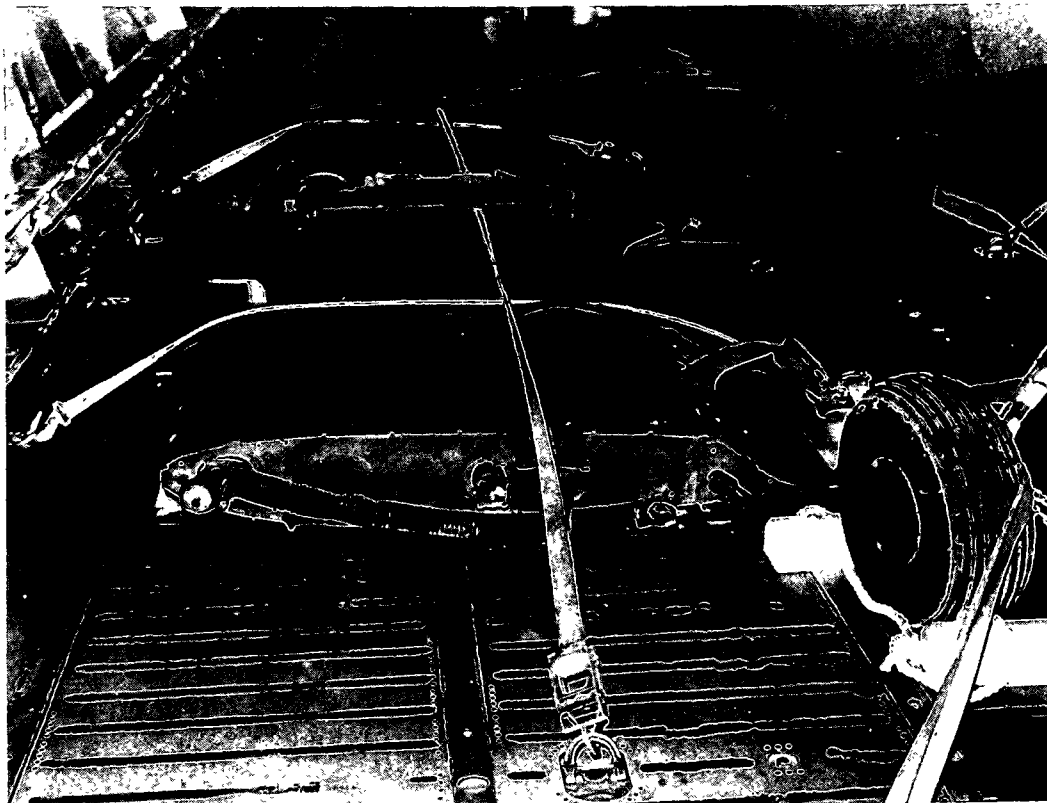


Figure 2-197. Tiedown of the tailwheel and left wing of the O-1. Note the felt padding under the tiedown straps at the wing edges.



*Figure 2-198. Tiedown devices at the right landing gear and right wing.
Note the felt padding under the wing tiedown
straps over the wings and at the edges.*

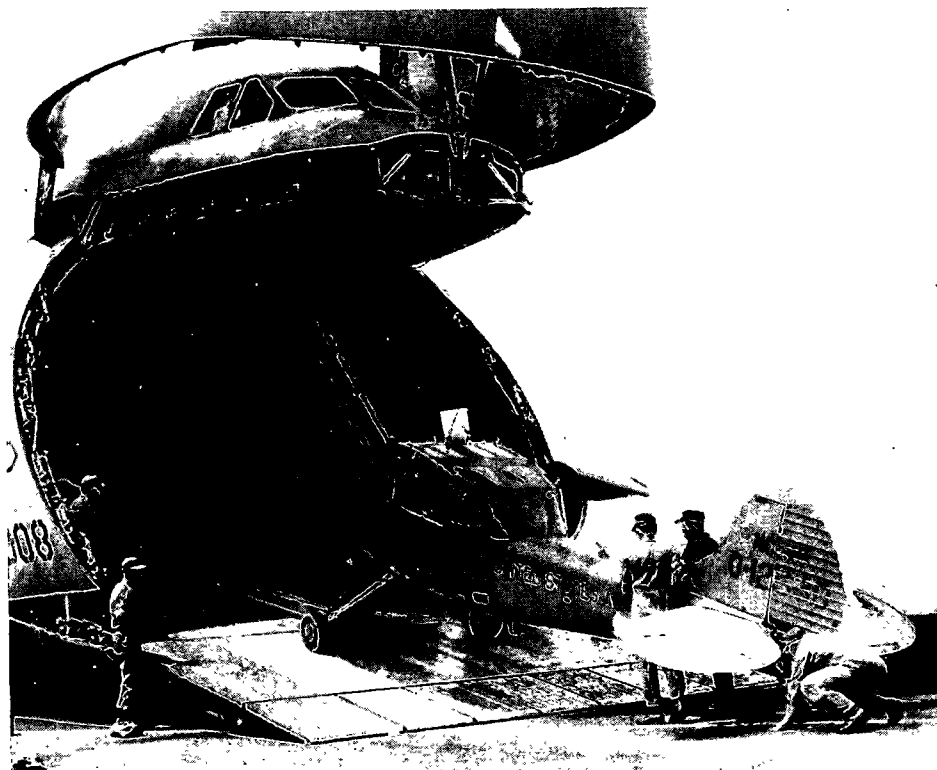


Figure 2-199. Loading the O-1 over the forward ramp.

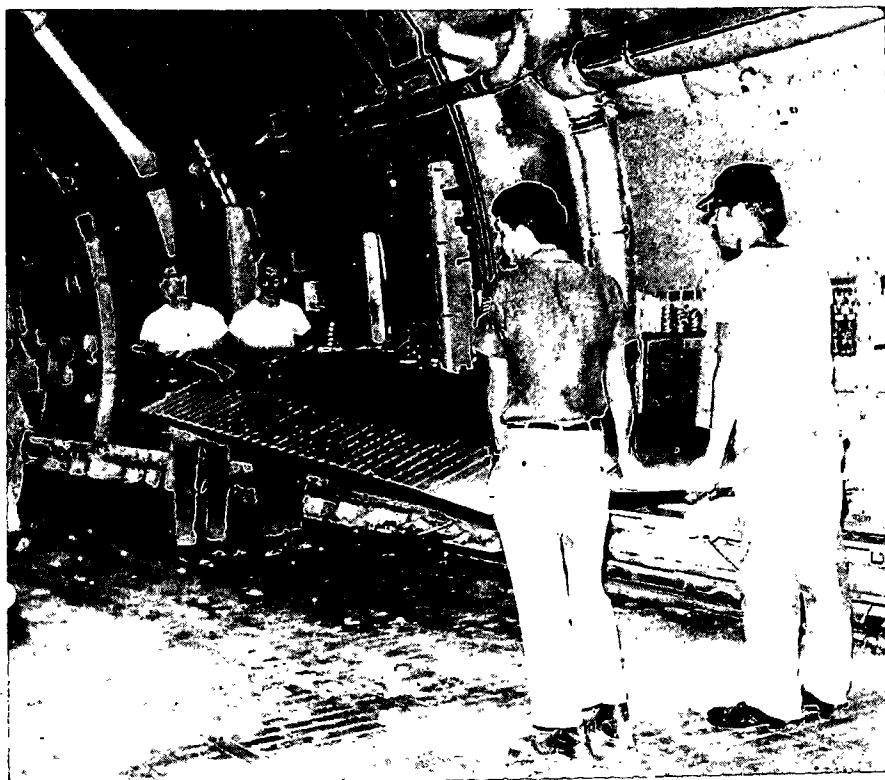


Figure 2-200. Manhandling an O-1 wing into the C-5.

2-271. C-5A Airplane Loading Configuration- for AH-1G Helicopter

Airplane forward kneeled and forward ramp in drive-in mode.

2-272. Preparing the AH-1G Helicopter

a. Remove the wings and stow on honeycomb paperboard until loaded in the airplane.

b. Attach the rotor blade tiedown straps to the blade tip caps.

c. If the fuel cells contain fuel, check to insure that they are not more than $\frac{3}{4}$ -full. If the cells have been drained and are to be left empty during transport, check to insure that they are purged. Provisions of TM 38-250 apply.

d. Install the ground handling wheels.

e. Attach the towbar to the helicopter skids.

f. Rotate the main rotor blades to a fore-and-aft position.

g. Six men prepare the helicopter in 15 minutes.

2-273. Materiel for the AH-1G Helicopter

a. Four medium clevis assemblies to be attached to the wing mounts as shown in figure 2-201.

b. Two main rotor blade tiedown straps, or suitable substitute, for use as rotor tag line during loading.

c. Two pieces of 3- by 4-foot honeycomb paperboard used for cushioning the two wings for tiedown.

d. One AH-1G towbar.

e. One set of AH-1G ground handling wheels.

f. Two $\frac{3}{4}$ - by 12- by 96-inch planks for parking shoring.

g. One 2- by 4- by 78 $\frac{1}{4}$ -inch towing bridle bracing plank.

h. Four MB-1 tiedown device chains for a towing bridle.

i. Four pieces of $\frac{1}{2}$ - by 36- by 36-inch felt sheeting, used under the tiedown straps passed over the wings.

j. One small bag in which to stow the small items during disassembly (nuts, screws, bolts, etc.).

2-274. Loading the AH-1G Helicopter

a. Position the helicopter in front of the C-5, facing in the appropriate direction (fig 2-205), tiedown diagram.

b. Remove the towbar; form and attach the towing bridle as shown in figure 2-202.

c. Position the bracing plank between the tow rings.

d. Attach the winch cable to the towing bridle.

e. Station the loading team as shown in figure 2-203; four men at the empennage; two men handling the tag lines; one man on top of the helicopter cabin to observe overhead clearance, and to pass information to the men holding the rotor tag lines and to the team leader. The leader moves about as

best to observe, assist in the loading and give instructions.

f. Winch the helicopter up the ramp into the airplane (fig 2-204).

g. The men at the empennage guide the helicopter. They keep the tail raised until the helicopter is past the ramp hinge, then loading is halted.

h. Position the parking shoring at the tiedown location.

i. Winch the helicopter into tiedown location onto the parking shoring.

j. Remove the ground handling wheels and stow and tie down in the crew seats.

k. Place the wing honeycomb paperboard in the tiedown location, then place the wings on them. NOTE: Loading, positioning, tying down the wings are essentially the same for all methods of packaging and cushioning.

l. Eight men load the helicopter and components in 10 minutes.

2-275. Tiedown for the AH-1G Helicopter (See Caution in Paragraph 1-9 c)

a. Tie down the helicopter in accordance with

the instructions in tiedown data table 2-33 and tiedown diagram (fig 2-205).

b. Place two pieces of felt sheeting over each wing, then tie down the wings with three CGU-1B tiedown devices (fig 2-204).

c. Attach the tiedown devices to the AH-1G (fig 2-204).

d. Tie down the rotor blades with the rotor blade tiedown straps.

e. Four men tie down the AH-1G helicopter in 10 minutes.

2-276. C-5A Airplane Offloading Configuration

Airplane forward kneeled with forward ramp in drive-off mode.

2-277. Offloading Instructions for the AH-1G Helicopter

a. Offloading the AH-1G helicopter is essentially the reverse of loading; except the winch is used for braking the helicopter as it moves down the ramp.

b. Eight men offload the AH-1G helicopter from the C-5 in 4 minutes.

c. Six men reassembly the helicopter in 10 minutes.

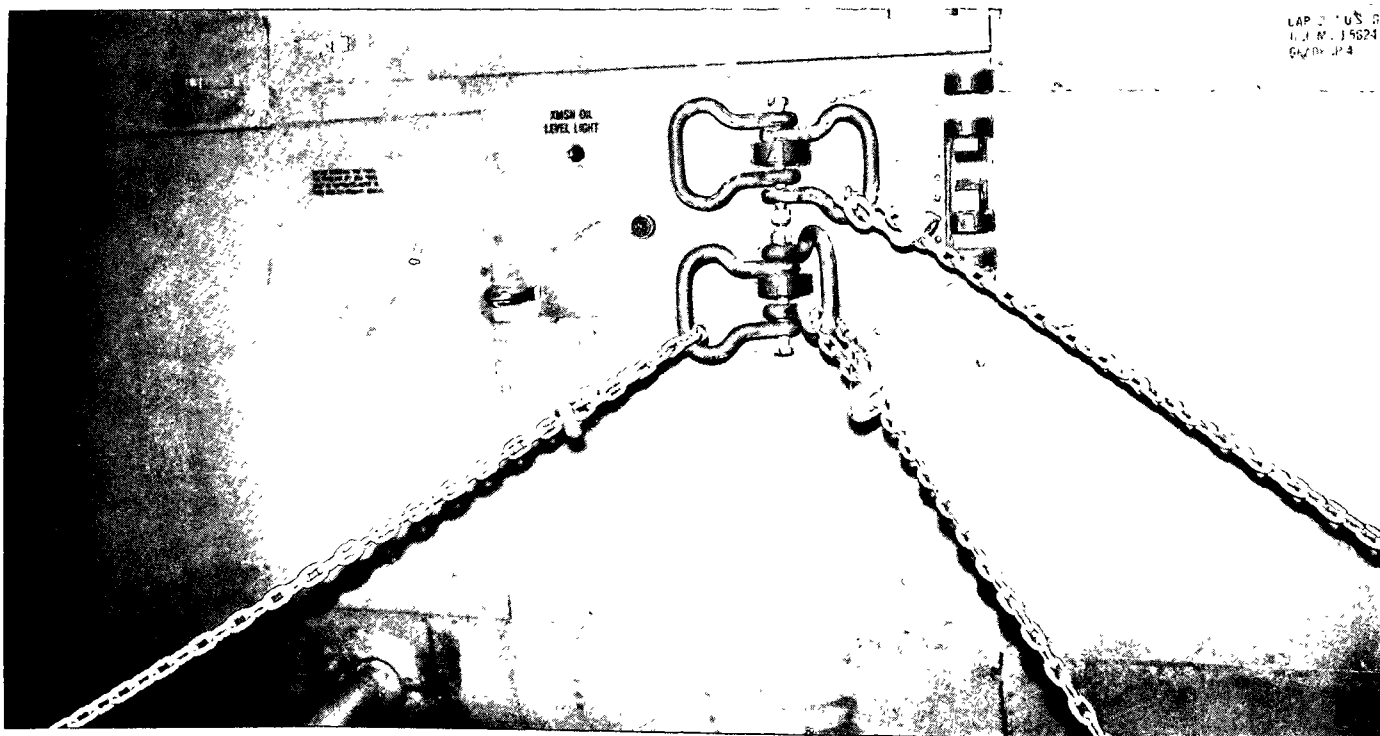
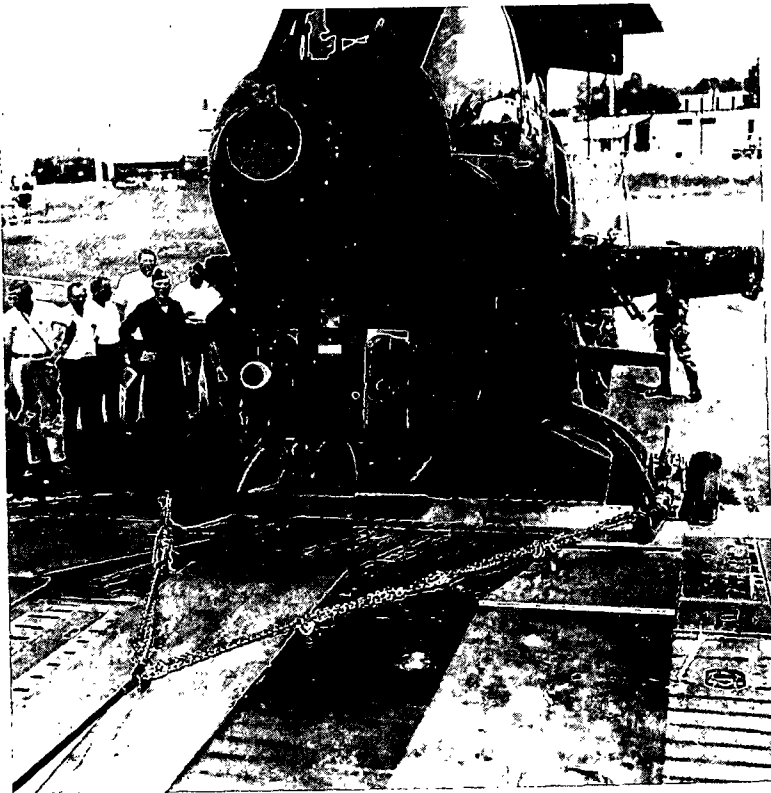
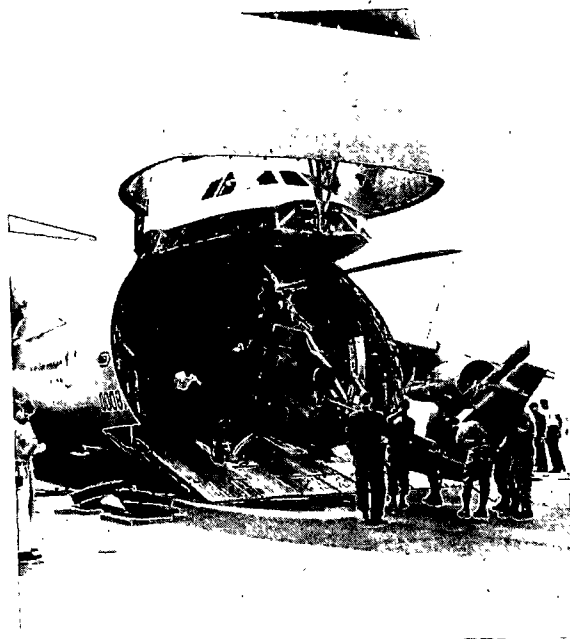


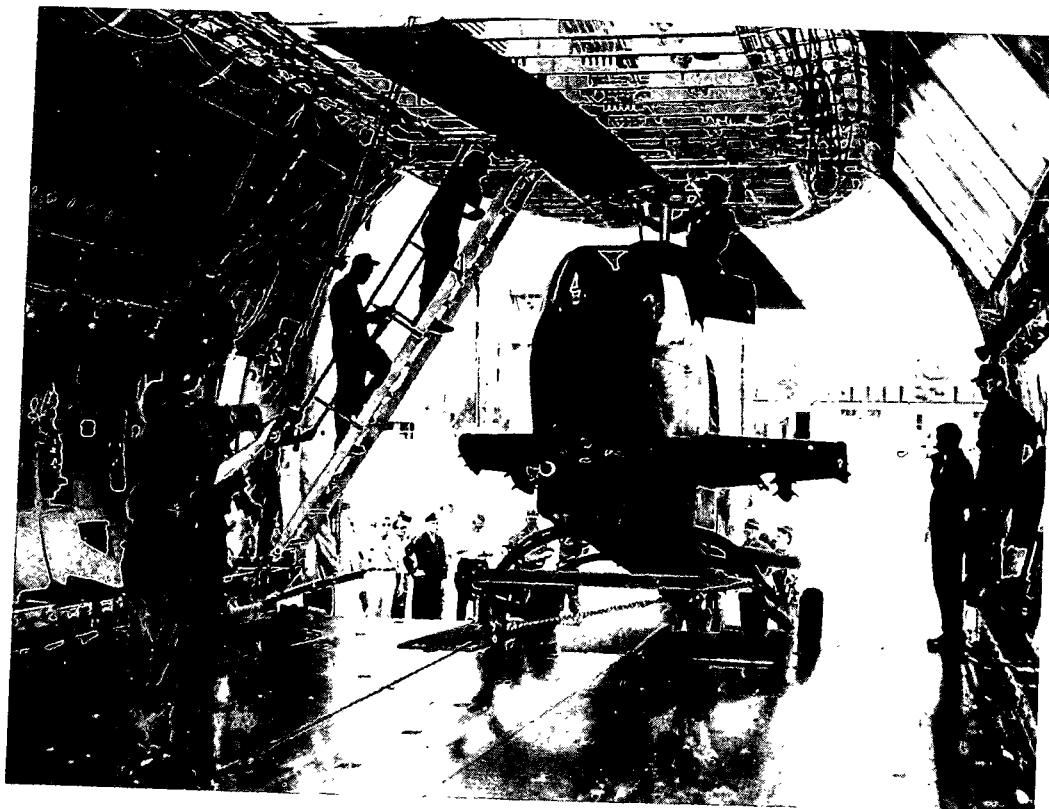
Figure 2-201. Medium clevis assemblies attached to wing mounts.



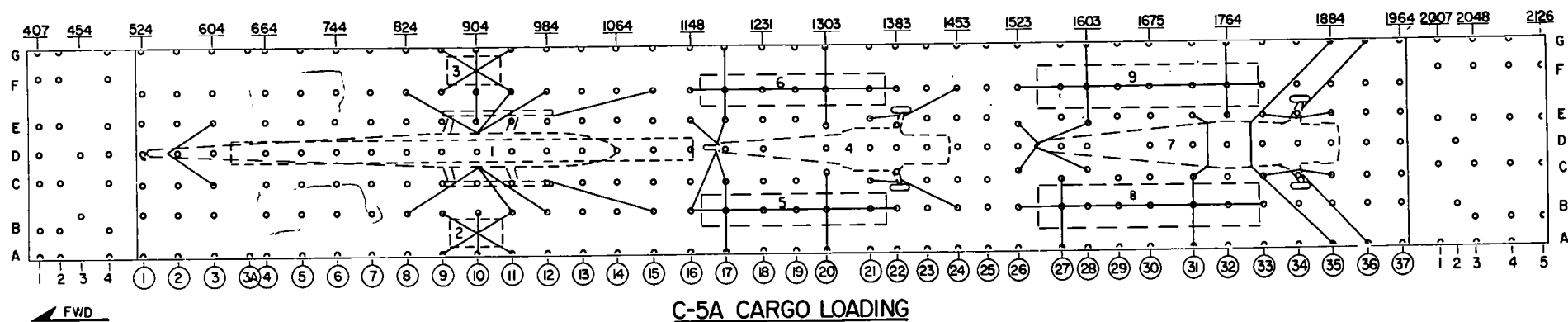
*Figure 2-202. Towing bridle attached to helicopter tow rings.
Note positioning of bracing plank between the skid tubes.*



*Figure 2-203. Loading the AH-1G helicopter over the forward ramp.
Note formation of loading team.*



*Figure 2-204. Winching the AH-1G helicopter into the cargo compartment.
Note the man on top of helicopter to observe clearance and
give instructions to men controlling blades with tag lines.*



LOAD 2-33

DESCRIPTION OF ITEM	VEHICLE FACING	LOCATION OF RP		WEIGHT	CUBE	REMARKS
		RP	STA			
1 AH-1G HELICOPTER, ATTACK	AFT	FRONT	1060	6,500	6,900	SHORING REQUIRED
2 AH-1G RIGHT STUB WING		WING ROOT	870			
3 AH-1G LEFT STUB WING		WING ROOT	870			
4 O-1 AIRPLANE, OBSERVATION	AFT	FRONT	1440	1,300	1,500	
5 O-1 RIGHT WING		WING ROOT	1370			
6 O-1 LEFT WING		WING ROOT	1370			
7 U-6A AIRPLANE UTILITY	AFT	FRONT	1890	4,500	2,450	
8 U-6A RIGHT WING		WING ROOT	1800			
9 U-6A LEFT WING		WING ROOT	1540			
TOTALS				12,300	10,850	

Figure 2-205. Tiedown diagram for load 2-33.

Table 2-33. Tiedown Data for Load 2-33

Item No.	Tiedown fitting	Tiedown device		Attach to item at:
		Quantity	Size	
1	B8	1	10,000	G-12 clevis at wing mount RH side
	F8	1	10,000	G-12 clevis at wing mount LH side
	B11	1	10,000	G-12 clevis at wing mount RH side
	F11	1	10,000	G-12 clevis at wing mount LH side
	B12	1	10,000	G-12 clevis at wing mount RH side
	F12	1	10,000	G-12 clevis at wing mount LH side
	B15	1	5,000	Skid tube tiedown ring RH side
	F15	1	5,000	Skid tube tiedown ring LH side
	C3 / E3	1	5,000	Around tail skid
	D16			Aft rotor blade secured to tail skid with blade tiedown strap Fwd rotor blade secured with blade tiedown strap
2	A9 / B11	1	5,000	Across right stub wing
	A11 / B9	1	5,000	Across right stub wing
	A10 / B10	1	5,000	Across right stub wing
3	F9 / G11	1	5,000	Across left stub wing
	F11 / G9	1	5,000	Across left stub wing
	E10 / G10	1	5,000	Across left stub wing
4	B16 / C17	1	5,000	Around tailwheel fork assembly
	E16 / E17	1	5,000	Around tailwheel fork assembly
	C21 / C21	1	5,000	Around strut RH side
	B24 / B24	1	5,000	Around strut RH side
	E21 / E21	1	5,000	Around strut LH side
	F24 / F24	1	5,000	Around strut LH side
5	B16 / B22	1	5,000	Over wing RH side of O-1
	A17 / C17	1	5,000	Over wing RH side of O-1
	A20 / C20	1	5,000	Over wing RH side of O-1
6	E16 / E22	1	5,000	Over wing LH side of O-1
	E17 / C17	1	5,000	Over wing LH side of O-1
	A20 / C20	1	5,000	Over wing LH side of O-1
7	C26 / E26	1	5,000	Around tailwheel fork assembly
	C28 / E28	1	5,000	Around tailwheel fork assembly
	C31 / E31	2	10,000	Through cargo compartment
	A35 / G35	4	10,000	Through cargo compartment
	C33 / C35	1	10,000	Through jack point on strut RH side
	E33 / E35	1	10,000	Through jack point on strut LH side
	A36	2	10,000	Inboard end of main gear axle RH side
	G36	2	10,000	Inboard end of main gear axle LH side
8	B26 / B33	2	5,000	Over wing RH side of U-6A
	A31 / C31	1	5,000	Over wing RH side of U-6A
	A27 / C27	1	5,000	Over wing RH side of U-6A
9	F26 / F33	2	5,000	Over wing LH side of U-6A
	E32 / G32	1	5,000	Over wing LH side of U-6A
	E28 / G28	1	5,000	Over wing LH side of U-6A

APPENDIX A

REFERENCES

1. Army Regulations (AR)

59-106 / AFR 76-7
70-39
220-10
310-50

Operation of Air Force Terminals.
Criteria for Air Transport and Airdrop of Materiel.
Preparation for Oversea Movement of Units (POM).
Authorized Abbreviations and Brevity Codes.

2. Field Manuals (FM)

1-15
21-5
21-6
21-60
55-15
55-30
61-100

Aviation Company, Battalion, Group, and Brigade.
Military Training Management.
Techniques of Military Instructions.
Visual Signals.
Transportation Reference Data.
Army Motor Transport Operations.
The Division.

3. Technical Manuals (TM)

9-500
9-1300-206
21-305 / AFM 77-2
21-306
38-250 / AFM 71-4

Data Sheets for Ordnance Type Materiel.
Ammunition and Explosives Standards.
Manual for the Wheeled Vehicle Driver.
Manual for the Tracked Combat Vehicle Driver.
Packaging and Handling of Dangerous Materials for Transportation by
Military Aircraft.

55-310
55-450-15
55-1510-202-20

Motor Transport Operations.
Air Movement of Troops and Equipment (Nontactical).

55-1510-202-35

Organizational Maintenance Manual: Army Models O-1A, O-1A(IT),
TO-1A, O-1D, O-1E, O-1F, and O-1G Aircraft.
DS, GS, and Depot Maintenance Manual: Army Models O-1A, O-
1A(IT), TO-1A, O-1D, O-1E, TO-1E, O-1F, and O-1G Aircraft.

55-1510-203-20
55-1510-203-35
55-1520-210-20

Organizational Maintenance Manual: U-6A Aircraft.
DS, GS, and Depot Maintenance Manual: U-6A Aircraft.
Organizational Maintenance Manual: Army Model UH-1D / H
Helicopter.

55-1520-210-34

Direct Support and General Support Maintenance Manual: Army
Model UH-1D / H Helicopter.

55-1520-214-20
55-1520-214-35

Organizational Maintenance Manual: Helicopter, Observation OH-6A.
DS, GS, and Depot Maintenance Manual: Helicopter, Observation
OH-6A.

55-1520-221-20
55-1520-221-34
55-1520-228-20
55-1520-228-34

Organizational Maintenance Manual: Army Model AH-1G Helicopter.
DS and GS Maintenance Manual: Army Model AH-1G Helicopter.
Organization Maintenance Manual: Army Model OH-58A Helicopter.
DS, GS, and Maintenance Manual: Army Model OH-58A Helicopter.

4. Technical Bulletin (TB)

55-46-1

Standard Characteristics (Dimensions, Weight, and Cube) for Trans-
portability of Military Vehicles and Other Outsize / Overweight
Equipment.

5. Technical Order (USAF)

TO 1C-5A-9

Loading Instructions, USAF Series, C-5A Aircraft.

APPENDIX B

VEHICLE CROSS REFERENCE

NOMENCLATURE	LOAD NUMBER
Airplane, Observation O-1E	2-33
Airplane, Tactical Utility U-6A	2-33
Armored Reconnaissance Abn. Assault Vehicle M551	2-5, 2-12
Attack Helicopter AH-1G	2-33
Carrier, CP, Light Tracked, M577A1	2-5, 2-7, 2-8, 2-16, 2-17
Carrier, Command and Reconnaissance, M114A1	2-5, 2-14, 2-17, 2-18
Carrier, 81MM Mortar, M125A1	2-17, 2-18
Carrier, Personnel, FT, Armored M113	2-8, 2-14, 2-16, 2-17, 2-18
Combat Engineer Vehicle, Full Tracked, M728	2-32
Crane, Truck Mounted, 20-Ton, RT, M20B	2-13, 2-15, 2-31
Erector-Launcher, Trailer Mtd. XM 790	2-6
Grader, Scraper, Westinghouse 440	2-15
Gun, FA, Self-Propelled, 175mm, M107	2-3, 2-5, 2-8
Helicopter, Light Observation, OH-6A	2-4, 2-9, 2-19
Helicopter, Light Observation, OH-58A	2-19
Helicopter, Utility, UH-1D	2-4, 2-9, 2-10, 2-11, 2-21
Helicopter, Utility, UH-1H	2-4, 2-9, 2-10, 2-11, 2-21
Howitzer, Light, SP, 105MM, M108	2-28
Howitzer, Medium, SP, 155MM, M109	2-14, 2-16
Launcher, Guided Missile XM 687	2-7
Launcher, Zero Length, Guided Missile XM78E3	2-1, 2-2
Loader, Guided Missile, Trailer Mounted, XM1E1	2-1
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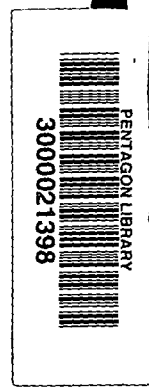
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